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Prior to 2001, the number of Individual Augmentees (IAs) required by Combatant Commanders (CCDRs) to fill unfunded temporary manpower requirements in support of approved operations had been less than 600 per year. Since the commencement of Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF), the demand for IAs has grown exponentially, and now exceeds 6,000 per year. The demand pattern for IAs has strained the Services' capabilities to provide the necessary number of ready, relevant and capable personnel to meet CCDR and Joint Force Commander requirements. Increased CCDR demand for IAs in support of the GWOT is a reflection of a force structure imbalance in the United States Armed Forces. This paper examines the nature of the Individual Augment construct, derives the implications for the Total Force and proffers recommendations to ensure that the Armed Forces of the United States remain effective. This thesis offers options to the Department of Defense (DOD) to fulfill CCDR requirements using Service assets in a more efficient, effective, and economical manner. Moreover, adoption of the recommendations offered will better contribute to the accomplishment of United States national security objectives by providing a more flexible, and tailored military capability that enhances the other elements of national power.

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JOINT FORCES STAFF COLLEGE
JOINT ADVANCED WARFIGHTING SCHOOL

INDIVIDUAL AUGMENTATION: A SERVICE REQUIREMENT – A JOINT SOLUTION

by

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A paper submitted to the Faculty of the Joint Advanced Warfighting School in partial satisfaction of the requirements of a Master of Science Degree in Joint Campaign Planning and Strategy.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Joint Forces Staff College or the Department of Defense.

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Abstract

Prior to 2001, the number of Individual Augmentees (IAs) required by Combatant Commanders (CCDRs) to fill unfunded temporary manpower requirements in support of approved operations had been less than 600 per year. Since the commencement of Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF), the demand for IAs has grown exponentially, and now exceeds 6,000 per year. The demand pattern for IAs has strained the Services' capabilities to provide the necessary number of ready, relevant and capable personnel to meet CCDR and Joint Force Commander requirements.

Increased CCDR demand for IAs in support of the GWOT is a reflection of a force structure imbalance in the United States Armed Forces. This paper examines the nature of the Individual Augment construct, derives the implications for the Total Force and proffers recommendations to ensure that the Armed Forces of the United States remain effective.

This thesis offers options to the Department of Defense (DOD) to fulfill CCDR requirements using Service assets in a more efficient, effective, and economical manner. Moreover, adoption of the recommendations offered will better contribute to the accomplishment of United States national security objectives by providing a more flexible, and tailored military capability that enhances the other elements of national power.

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I. Introduction

Prior to 2001, the number of Individual Augmentees (IAs)[1] required by Combatant Commanders (CCDRs) to fill unfunded temporar y manpower requirements in support of approved operations had been less than 600 per year. As illustrated in the Joint Individual Augmentation Trend Line[2] below, demand for IAs has climbed dramatically since the commencement of Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF). Today, the demand for IAs exceeds 6,000 per year.[3]

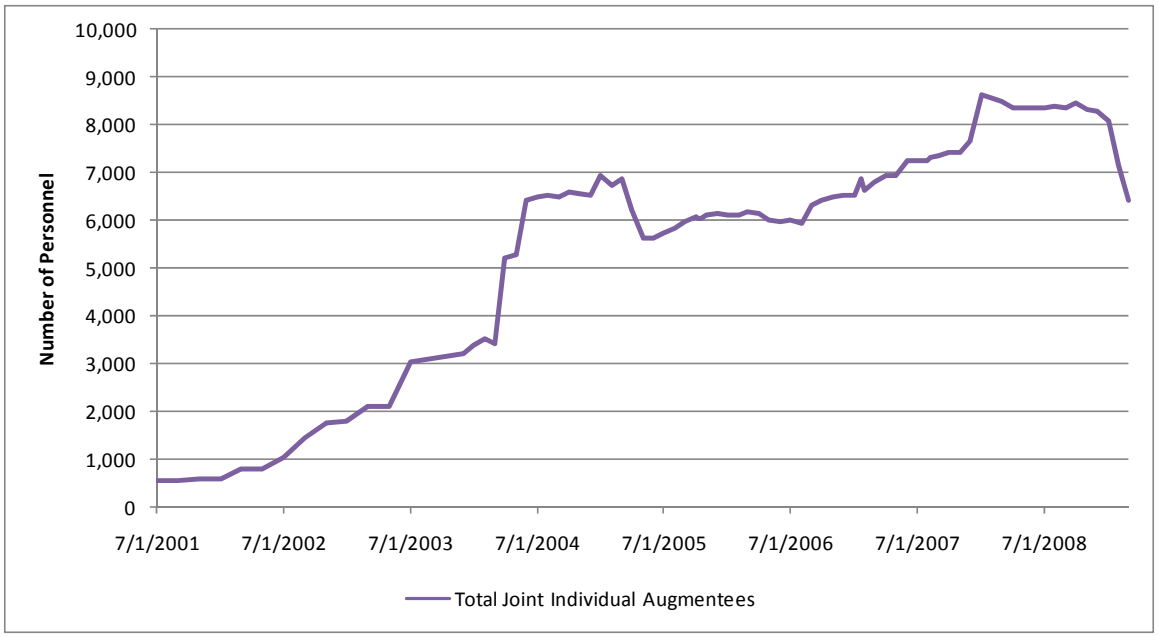

Figure 1: Joint Individual Augmentation Trend Line

[1]An IA is an "unfunded temporary duty position (or member filling an unfunded temporary duty position) identified on a [Joint Manning Document] JMD by a supported combatant commander to augment staff operations during contingencies. This includes positions at permanent organizations required to satisfy a "heightened" mission in direct support of contingency operations." Chairman of the Joint Chiefs of Staff, *Joint Officer Management Program Procedures*, CJCS Instruction 1330.05, May 1, 2008, 103 http://www.dtic.mil/cjcs_directives/cdata/unlimit/1330_05.pdf (accessed February 24, 2009).

[2] Chart developed based upon information provided by Chairman of the Joint Chiefs of Staff J-1 Division. Theresa S. Reisenfeld, e-mail to author, February 27, 2009.

[3] The number of IAs reflects the number of positions as of a particular date. The actual number of people required to fill these billets may be in excess of any given number, as not all IA assignments are one-year orders. Services fill the billets and may adjust the rotation schedules as needed.

The responsibility to provide, train and equip IAs is a Service responsibility. However, the demand pattern for IAs due to the Global War on Terror (GWOT) has strained the Services' capabilities to provide the required number of ready, relevant and capable personnel in a timely manner. The demand for capabilities and skill sets that are either non-existent, or in high demand and short supply, are a partial reason for this strain. Military police, engineers, intelligence officers, logisticians and Explosive Ordnance Disposal (EOD) personnel are but a few of the Military Occupational Specialties (MOS) typically referred to as High Demand/Low Density (HD/LD) career fields. In addition, the assignment, training and management of personnel to support IA positions is not standard across the Services. This has resulted in a discontinuity in the availability and deployment of personnel with like skills to meet CCDR and Joint Force Commander (JFC)[4] requirements. Further, distinct and disparate Service-centric policies and procedures have reduced Total Force generation capability and lengthened the reset period for all Services.

In an era of persistent conflict, rapid change, increasing competition and ever-important resource constraints, the United States (U.S.) can ill afford to bring to bear a national instrument of power that is not properly tailored to meet mission requirements. Increased CCDR demand for IAs in support of the GWOT is a reflection of a force structure[5] imbalance in the United States Armed Forces. This thesis examines the nature

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[4] A Joint Force Commander (JFC) is a "general term applied to a combatant commander, subunified commander, or joint task force commander authorized to exercise combatant command (command authority) or operational control over a joint force. U.S. Department of Defense, *Department of Defense Dictionary of Military and Associated Terns,* [as amended October 17, 2008], Washington, D.C., Joint Publication 1-02, October 17, 2008, 300.

[5] In this instance, force structure refers to the "numbers, size, and composition of the units that comprise US defense forces; e.g., divisions, ships, air wings." U.S. Department of Defense, *Dictionary of Military and Associated Terns,* 342.

of the Individual Augment construct, derives the implications for the Total Force[6] and proffers recommendations to ensure that the Armed Forces of the United States remain effective.

This thesis offers options to the Department of Defense (DOD) to fulfill CCDR requirements using Service assets in a more efficient, effective, and economical manner. Moreover, adoption of the recommendations offered will better contribute to the accomplishment of United States national security objectives by providing a more flexible, and tailored military capability that enhances the other elements of national power.

The research traces the obscure evolution of the Individual Augment construct from the conditions that led to the establishment of the All Volunteer Force, with the creation of the Total Force concept and provides an analysis of the issues that surround the employment of IAs. This paper adds to the ongoing dialogue in the United States concerning the best way to match ends, ways and means in support of national interests using the military instrument of power.

[6] In this context, the term "Total Force" is the addition of National Guard and Reserve forces to Active Duty forces and expressed as "Total Military Personnel End-Strength."

II. The Operational Environment Today

Setting the Stage

Since September 11, 2001, more than 1.7 million members of the United States Armed Forces have answered the Nation's call in support of the GWOT[7]. These men and women have served with distinction in places as diverse as Guantanamo Bay, Cuba and Iraq, the Philippines, Afghanistan, and the Horn of Africa. They have performed their normally assigned missions as integral parts of units - Army Brigade Combat Teams (BCTs), Marine Regimental Combat Teams (RCTs) and Battalions, Naval Mobile Construction Battalions (NMCBs), and Air Force Squadrons. They have also served in non-traditional roles. Many have deployed as Individual Augmentation (IA)[8], Ad-Hoc (AH)[9], or In-Lieu-Of (ILO)[10] forces for Provincial Reconstruction Teams (PRTs), Military Training Teams (MTTs), and various Joint Task Forces (JTFs)[11]. These Soldiers, Sailors, Airmen and Marines have demonstrated the value of operating in a joint, interagency and multinational fashion as part of the Total Force. Military operations in Iraq, Afghanistan and elsewhere have proven the wisdom of the Goldwater-

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[7] Congresswomen Nancy Pelosi, "The Cost of War in Iraq: 'Mission Accomplished' - 5 Years Later," Speaker Nancy Pelosi, http://speaker.house.gov/newsroom/reports?id=0035 (accessed February 11, 2009).

[8] From a functional perspective, Individual Augmentees are "individuals deployed for temporary positions that augment staff operations during contingencies. An example would be individuals deployed to fill temporary positions in the Multinational Force-Iraq joint headquarters." U.S. Government Accountability Office, *Military Readiness: Joint Policy Needed to Better Manage the Training and Use of Certain Forces to Meet Operational Demands*, GAO-08-670, (Washington, DC: Government Printing Office, May 2008), 2, http://www.gao.gov/new.items/d08670.pdf (accessed February 11, 2009).

[9] Ad-Hoc forces are "temporary units formed by consolidating individuals and equipment from various commands and services and then training these personnel to meet mission requirements." Members of PRTs and MTTs are an example of Ad-Hoc forces. Ibid.

[10] In-Lieu-of forces are those "trained and deployed to execute missions outside of their core competencies." An Army Transportation Company retrained and deployed to fill a military police requirement is an example. Ibid.

[11] A Joint Task Force (JTF) is a "joint force that is constituted and so designated by the Secretary of Defense, a combatant commander, a subunified commander, or an existing joint task force commander." U.S. Department of Defense, *Dictionary of Military and Associated Terns*, 300.

Nichols legislation[12]. However, they have also highlighted some of the unforeseen challenges in employing the Total Force to perform the full range of military operations along the spectrum of conflict from peace to war[13].

The continuing national security dilemma for the United States is how to best apply its resources to organize, train and equip a Total Force that is sufficiently sized and capable of performing the full range of military operations. The additional challenge facing the nation is how to size and scale the Total Force in such a way that it can perform required mission sets over an extended period. Naturally, current operational requirements, future threat forecasts, and financial considerations have played a role in developing and optimizing the size and capabilities of the Total Force that exists today. The GWOT demonstrates that in a world of scarce resources, it is not possible to adequately resource and scale the Active Component (AC) to perform all required military missions. However, significant technological advances in everything from semiconductor design and fabrication, to software development, and the growth of internet infrastructure have paved the way for what some termed a Revolution in Military Affairs (RMA). That is, the adaptation of technology to provide an overwhelming or decisive military advantage to the user. The development of stealth technology and Laser Guided Bombs are two examples of technology that generated a decisive military

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[12] Among other things, the Goldwater-Nichols Department of Defense Reorganization Act of 1986 (GNA) was aimed at promoting more effective and efficient use of military forces by realigning the operational chain of command through Combatant Commanders and away from Service Chiefs.

[13] Military operations can encompass such diverse activities as Foreign Humanitarian Assistance (FHA), Noncombatant Evacuation Operations (NEO), Counterinsurgency Operations, and traditional conventional combat operations.

advantage for U.S. military forces. Likewise, Gordon Moore's[14] observation that the computing power of an Application-Specific Integrated Circuit would double every two years led to the belief that exponential advances were continually possible in a variety of fields including the military-industrial complex.

This was the genesis for the concept of "transformation,"[15] or exponential change. Leading from the front, Secretary of Defense Donald Rumsfeld embraced transformation. Through transformation, he sought radical improvements in the efficiency and effectiveness of the DOD while simultaneously increasing the lethality of applied force. Laying aside efficacy of the transformation programs undertaken by Secretary Rumsfeld, it is clear that the application of technology to increase kinetic capabilities provided a valid rationale to reduce the number of personnel required to fight and win a conventional conflict. This was borne out by the quick defeat of conventional Iraqi forces in 2003. However, transformation could not provide a solution set for all problems, least of all the insurgency that followed. Nor could transformation apply in all settings. While transformation resulted in a larger "kinetic footprint" with fewer people, it did not translate into a smaller equally effective "non-kinetic footprint." As a result, a large

[14] Gordon Moore was a co-founder of Intel Corporation and wrote a paper in the 1960s describing the exponential increase in the numbers of transistors that could be placed on an integrated circuit. His observations resulted in a general theory concerning exponential growth that became know as "Moore's Law."

[15] Defined by the Department of Defense in the April 2003 Transformation Planning Guidance document as "a process that shapes the changing nature of military competition and cooperation through new combinations of concepts, capabilities, people and organizations that exploit our nation's advantages and protect against our asymmetric vulnerabilities to sustain our strategic position, which helps underpin peace and stability in the world." U.S. Department of Defense, "Base Realignment and Closure 2005: BRAC Definitions," U.S. Department of Defense, http://www.defenselink.mil/brac/definitions_brac2005.html (accessed February 11, 2009).

demand for critical capabilities and enabling functions resident in the Reserve Component (RC)[16] required to prosecute military operations remained.[17]

Initial success and ongoing efforts in the GWOT have validated the Total Force concept.[18] Operational requirements and financial considerations have been central in developing and optimizing the sizing and capabilities of forces and force packages available for tasking. General Eric K. Shinseki, Chief of Staff of the Army, championed the efforts to transform the Army to a more modular and expeditionary force. Secretary Rumsfeld embraced Army transformation and the transition to a lighter, agile and more effective force. This resulted in an integrated force concept for the Army, Army Reserve and National Guard where the unit of employment was a BCT. Using the BCT as a building block, the Army was better aligned and organized to:

> provide necessary forces and capabilities to the Combatant Commanders in support of the National Security and Defense Strategies… [to] conduct prompt, sustained combat and stability operations on land…in order to serve the American people, to defend the Nation, to protect vital national interests, and to fulfill national military responsibilities.[19]

However, since 2001 the Armed Forces' combat capability has been attrited by the nature and duration of the conflicts the United States has engaged in. Follow-on missions have required continual usage of both Active and Reserve forces resulting in force structure

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[16] The reserve components of the armed forces are: (1) The Army National Guard of the United States. (2) The Army Reserve. (3) The Naval Reserve. (4) The Marine Corps Reserve. (5) The Air National Guard of the United States. (6) The Air Force Reserve. (7) The Coast Guard Reserve. *Reserve Components Named, U.S. Code*, Title 10, secs. 10101 (2007).

[17] High Density/Low Demand skills sets and functions resident in the Reserve Component include Logistics, Combat Arms, Combat Service Support, Intelligence, Civil Engineering, Administrative and Health Care.

[18] The Total Force Concept was developed by Secretary of Defense Melvin Laird in 1970 as a response to fiscal constraints imposed by the Vietnam War. The concept was to use early augmentation of Guard and Reserve forces as a vehicle to trim the size of the active duty forces and reduce defense expenditures. The Total Force Concept is discussed at length in Chapter IV.

[19] U.S. Department of Defense, "2007 Posture Statement," U.S. Department of Defense, http://www.army.mil/aps/07/mission.html (accessed February 11, 2009).

strains that have been noted by others at length.[20] Sound policy, financial, and practical considerations that drove force sizing and capability generation prior to 2001 worked well in a conventional fight of limited duration. In an irregular warfare environment where time, financial resources and patience are just as important as force structure, they do not work so well.

As Clausewitz noted, "first, the supreme, the most far-reaching act of judgment that the statesman and commander have to make is to establish…the kind of war on which they are embarking."[21] Since 2001, the U.S. has been engaged in a wide range of military operations from conventional combat to counter-insurgency and nation building; however, the arena has primarily been land-centric. Because the Army is primarily designed, organized, equipped and trained to fight land wars, it is no surprise that they have been fully engaged in the effort. True to a lesser extent for the Marine Corps, similar generalizations concerning their role, usage and engagement in Afghanistan and Iraq are valid. The same is true for the Reserve and Guard components of the Army and Marine Corps. For the United States, the determining factor in the selection of particular force packages is not solely based upon the range of military operations to be employed. It is also a consideration of the arena (environment) in which those force packages are to be used. In this way, the limit of what is possible is constrained (or defined) by the operational environment – in this case a land-centric battlespace. A land war requires an

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[20] U.S. Government Accountability Office, *Military Readiness: Impact of Current Operations and Actions Needed to Rebuild Readiness of U.S. Ground Force*, GAO-08-497T, (Washington, DC: Government Printing Office, February 2008), 2, http://www.gao.gov/new.items/d08497t.pdf (accessed February 11, 2009).

[21] Carl von Clausewitz, *On War*, trans. Peter Paret and Michael Eliot Howard (Princeton, N.J.: Princeton University Press, 1984, 1976), 88.

army. What a nation tasks an army to do determines the number of soldiers, the nature and amount of resources needed to complete the mission. It is one type of task for an army to defeat an adversary. It is something wholly different for an army to be required to restore or rebuild a nation. To defeat an adversary and then rebuild a nation requires a different solution set. It demands substantially more troops and resources than are required to simply conquer it. In a land-centric battlespace, the assigned and implied tasks required of the Total Force profoundly affect the specific roles and missions that each of the Services can perform.

The Challenges – When "Joint" is No Longer Good Enough

The land-centric battlespace in which the United States is currently engaged has shaped the nature of what is both possible and feasible for each of the Services to perform – either in a Joint or single Service role. Not all Services and/or capabilities can be utilized in every instance. For example, when requesting close air support in downtown Baghdad, the requirement to minimize collateral damage and restrictive Rules of Engagement (ROE) will necessarily limit the usage of particular force packages. Thus, the inability to employ A-10s, Tomahawk Land Attack Missiles (TLAMs), Naval Gunfire Support, and fixed-wing aircraft may leave helicopter gunship support as the only option. In concert with military operations undertaken, the environment also influences the wear pattern on the Total Force components. Service capabilities and components wear out unevenly in response to the types and duration of utilization. By analogy, the stress and wear pattern generated on any given airframe is different when flying "highway" or "city" miles. The land-centric nature of the current U.S. operations limits the

preponderance of effort to Army BCTs and Marine RCTs and Battalions. As a result, the operational tempo for Army and Marine units has resulted in a significantly higher wear pattern relative to the other Services.

The usage of a particular Service or force package is largely a function of the environment and military operations undertaken. It is important to note that the usage of force capabilities does not necessarily lead to a significant degradation in capability or increased wear. Limited degradation results if the tasking is of a limited or short duration. This is also true if the Service was built to absorb the wear as something done in the normal course, and not as an exception. However, the converse is also true. A wear pattern may be non-linear or even exponential in certain circumstances. If the forces available are limited and/or not allowed sufficient time to reset and regenerate – much like a battery that has a charge cycle that diminishes over time – a non-linear wear pattern may result. Today's U.S. military is lighter, more agile, smaller, and deployed more often for longer periods. In spite of transformation efforts, military operations since 2001 have demonstrated that neither the Army, nor the Marine Corps are capable of meeting current mission requirements alone. A Total Force solution employing Air Force, Navy, Marine Corps and Army personnel in non-traditional roles has been the linchpin of success. However, the land-centric nature of the environment, combined with taskings that are not in the normal course have left an uneven wear pattern on the Services and been borne largely by the Army and Marine Corps.

The uneven wear patterns experienced by the Army and Marine Corps have necessitated changes in roles, functions and mission of personnel within the Services - primarily the Air Force and the Navy. The establishment of provisional military police

units, civil affairs battalions and Provincial Reconstruction Teams (PRTs) using personnel not specifically trained or normally assigned these functions is illustrative of these changes in roles and missions. In many cases, reserve personnel have performed many of these functions. These personnel have been retasked and retrained from other MOSs and then either assigned as Individual Augmentees, or deployed on In-Lieu-Of and Ad-Hoc missions. While exemplifying the "can do" spirit and flexibility in the execution of these non-traditional missions, the military has proven that significant capability shortfalls exist in the current force structure. In addition, other HD/LD capabilities such as logistics, intelligence, and military police have experienced higher wear patterns in all of the Services. Thus, due to environmental constraints, limited organic Service resources and higher wear patterns, the repurposing of forces to fill IA, Ad-Hoc and ILO missions is now a critical enabling function for the GWOT.

As outlined above, the land-centric nature and location of the current fight, in concert with the types of operations undertaken, limits the ability of the Air Force and Navy to perform their core functions and meaningfully alter the wear patterns of Army and Marine Corps forces. Due to limited resources and increased demand, non-traditional support for the Army and Marine Corps has been required of the Air Force and Navy. This has taken the form of IA and ILO assignments of Airmen and Sailors to jobs outside of their occupational specialties to support traditional Army or Marine Corps missions. By providing convoy drivers, prison guards, linguists and the like, the Navy and Air Force have been enabling critical Combat Service Support (CSS) functions required by the Army and Marine Corps and contributing to mission accomplishment of the Total Force.

By necessity, the U.S. has experienced a paradigm shift in the roles and missions of the Active and Reserve components. The past seven years have redefined the United States' approach to force employment and changed the nature of the Active and Reserve/Guard relationship. Gone are the distinctions between an "Operational" Active Component and a "Strategic Reserve." This has been replaced by a Total Force that is operational by necessity, strategic in theory, subject to environmental constraints and uneven wear patterns. It is no longer enough to be "Joint" in outlook and application of Service capabilities or force packages. The requirement is that the Total Force be effective in order to be successful. Thus, each Service must enable mission accomplishment; contributing core capabilities when appropriate, and doing so in non-traditional ways as well. A particular Service capability may not always be required; however, the Total Force requires enabling capabilities that are "plug-and-play" in a joint environment. A Service must remain relevant to the fight at hand in order to contribute to the effectiveness and success of the Total Force. Otherwise, the application of the military instrument of power may be marginally effective at best and altogether unproductive at worst.

Building on the initial observations made in this chapter, the following chapter examines a series of complex political, policy and economic decisions that ultimately resulted in the creation of the IA program. An examination of the Employment Act of 1946 and the dynamic tension between foreign and domestic policy concerns during the Vietnam War will illustrate the significance of short-term decisions and long-term unforeseen consequences. The analysis will demonstrate the effect a few short-run

economic, political and policy decisions had on military force planning and force structure in the United States.

III. Preferences, Primacy and Policy Pursuits

An idealist believes that the short run doesn't count. A cynic believes the long run doesn't matter. A realist that what is done or left undone in the short run determines the long run.[22]

Sydney J. Harris

There is no limit to how complicated things can get, on account of one thing always leading to another.[23]

E.B. White

When historians reflect on the events of the first decade of this millennium, it will be fascinating to see what observations they make about the events shaping the world today. The GWOT, the "financial meltdown," globalization, climate change, high unemployment, and illegal immigration are all issues of domestic and international significance today. Will these events have historical import in twenty, thirty, or even forty years from now? What lessons or conclusions will historians draw from the observations that they make? Will they be able to piece all of these events together as part of a larger interconnected whole that is not readily apparent to the pundits, politicians and public today? Or, will that which is evident and deemed to be true today, hold tomorrow?

Fundamentally, the answers to these questions will depend upon the observer's ability to recognize the pattern of cause and effect that follows from choices people and their representative institutions have made over time. Importantly, the validity and

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[22] The Quotations Page, "Quotations by Author: Sydney J. Harris," The Quotations Page, http://www.quotationspage.com/quotes/Sydney_J._Harris/ (accessed March 8, 2009).
[23] BrainyQuote, "E.B. White Quotes," BrainyQuote, http://www.brainyquote.com/quotes/authors/e/e_b_white_2.html (accessed March 8, 2009).

usefulness of the insights historians offer will directly tie to their ability to place events into "context" and link short-run decisions with long-term consequences. It is safe to say however, that future historians will have the benefit of hindsight, and fully appreciate the Law of Unintended Consequences.[24] Much like Murphy's Law, the Law of Unintended Consequences is constantly at play, and more meaningful in the course of human events than one would suspect. A particularly relevant example today would be the initial securitization of mortgage-backed instruments by Salomon Brothers and other investment banks in the 1980s. When first introduced, the concept of bundling mortgage interest payments together and creating an investment similar to a traditional bond was foreign, but understandable. These initial mortgage-backed securities led to a proliferation of increasingly complex financial instruments that included the invention of Credit Default Swaps (CDS),[25] which toppled American International Group (AIG), and precipitated the current financial crisis. Only now, twenty years after the creation of mortgage-backed securities,[26] and ten since the debut of the CDS, are the long-term negative consequences of short-run economic decisions being understood in the financial, legal and political

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[24] The law of unintended consequences stipulates that the decisions people make always generate unanticipated or unintended results that are either positive or negative, known or unknown. Adam Smith first applied the law in an economic context. Today, the law describes the second and third orders impacts of legislation, regulation and policy formulation. Rob Norton, "Unintended Consequences," *Concise Encyclopedia of Economics*, http://www.econolib.org//library/Enc/UnintendedConsequences.html (accessed March 23, 2009).

[25] A Credit Default Swap (CDS) is a credit derivative or agreement between two counterparties, in which one makes a payment to the other and gets a promise of a payoff if a third party defaults. The first party gets credit protection, a kind of insurance, and is the "buyer." The second party gives credit protection and is the "seller." The third party, the one that might go bankrupt, or default, is the "reference entry." Similar to an insurance policy, a CDS allows the debt owners to hedge, or insure against a default on a debt. However, because there is no requirement to actually hold any asset or suffer a loss, a CDS may be used for speculative purposes. F. William Engdahl, "The Next Crisis: Sub Prime is Just 'Vorspeise'," *Financialsense.com*, June 6, 2008. http://www.financialsense.com/editorials/engdahl/2008/0606.html (accessed March 23, 2009).

[26] For a readable account of derivative security creation by a former bond trader at Salomon Brothers, see Michael M. Lewis', Liar's Poker: *Rising Through the Wreckage on Wall Street* (New York: Norton, 1989).

arenas.[27] The unintended consequence of attempting to reduce or hedge short-term financial default risk using a CDS actually resulted in increased aggregate default risk. In a similar way, we are now able to place in context a series of complex political, policy and economic decisions that resulted in creation of the IA program. Through a series of short-run decisions made beginning in the 1940's, the United States generated the force structure imbalance in the Armed Forces that exists today.

Employment Act of 1946

In 1945, a congressional representative from Texas named John Patman introduced a bill that would chart the course of economic policy in the United States for the next fifty years. With memories of the Great Depression and 25 percent unemployment rates in the forefront of their minds, legislators sought to address the seemingly persistent problem of unemployment and introduced the Full Employment Bill. The sponsors of the bill were both proactive and pragmatic in their desire to promote general welfare. On the one hand, they were acutely aware of the pending return of millions of U.S. servicemen to the labor market and afraid of a return to pre-war unemployment levels. On the other hand, was a general belief that "earlier failures to deal with massive worldwide unemployment had contributed to significantly to the rise of National Socialism, which eventually culminated in World War II."[28]

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[27] JP Morgan invented the CDS in 1996 and initially used it as a vehicle to insure against the possibility of default on European government bonds. Gillian Tett, "The Dream Machine: Invention of Credit Derivatives," *The Financial Times*, March 25, 2006. http://www.ft.com/cms/s/s/7886e2a8-b967 11da-9d02-0000779e2340html (accessed March 23, 2009).

[28] G.J. Santoni, "The Employment Act of 1946: Some History Notes," The Federal Reserve Bank of St. Louis Review 68 (November 1986): 5.

At the time the bill was drafted, John Maynard Keynes'[29] views on the nature of full employment and its relationship to aggregate demand had gained currency in the United States.[30] Keynes had argued against the conventional economic wisdom, which supported balanced budgets, and instead favored deficit spending. It was Keynes' view that "unemployment was the result of insufficient aggregate demand relative to the full supply of output... [that resulted] in aggregate demand generated business cycles with corresponding fluctuations in employment and unemployment."[31] His solution was simple: substitute government spending for private investment when required. The theory was that in a slow growth or downward economic cycle, an increase in government spending would increase aggregate demand and then lead to an increase in employment. Initially an opponent of deficit spending, Franklin Delano Roosevelt's reluctant embrace of Keynes' ideas and the spectacular success of the U.S. economy during World War II paved the way for the adoption of "Keynesian economics" worldwide.[32]

Armed with the successful application of Keynesian economics to the U.S. economy, supporters of the Full Employment Bill sought to enshrine in law the right to a job and assign the Federal Government the responsibility to ensure full employment. The

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[29] John Maynard Keynes was the son of a Cambridge economist named John Neville Keynes. He served with the British civil service in India before joining the Treasury during World War I. In 1936, he published his seminal work entitled "The General Theory of Employment Interest and Money" for which he is most well known. The book laid the foundation for the relationship of aggregate demand to compensatory spending. Robert B. Reich, "John Maynard Keynes," *Time Magazine*, March 29, 1999, 136-138.

[30] Ibid.

[31] Santoni, "The Employment Act of 1946: Some History Notes," 7.

[32] President Roosevelt explained that the government would "create an economic upturn" by increasing government spending. The increased government spending would lead to an increase in aggregate demand and job creation. Keynes could not have asked for a better set of circumstances as "the nation's output almost doubled, and unemployment plummeted - from more than 17% to just over 1%." Reich, "John Maynard Keynes," 136-138.

Bill stated, "All Americans...are entitled to an opportunity for useful, remunerative, regular, and full-time employment."[33] The language also stipulated that it was the Federal Government's responsibility to, "assure continuing full employment, that is, the existence at all time of sufficient employment opportunities for all Americans."[34] In true Keynesian fashion, the Bill mandated that "the Federal Government shall…provide such volume of Federal investment and expenditure as may be needed…to assure continuing full employment."[35] While Congress was sympathetic to the aims of the Bill, the provisions requiring the Federal Government to both provide the jobs, and the spending to create those jobs, proved untenable, and the provisions were removed. Although significantly altered, the Bill that became the Employment Act of 1946 was a watershed in U.S. economic policy.

President Harry S. Truman signed the Employment Act into law. The Act was more subtle that its predecessor; however, no less influential. The Act stated, "It is the continuing policy and responsibility of the Federal Government…to promote maximum employment, production, and purchasing power."[36] In furtherance of the government's responsibility, the Congress directed that "the President shall transmit to Congress…a program for carrying out the policy [promotion of maximum employment, production and purchasing power] declared in section 2."[37] The Act did not explicitly require the Federal Government to provide Americans an opportunity to work, or to create the aggregate demand needed to provide for full employment. Instead, it only required that

[33] Santoni, "The Employment Act of 1946: Some History Notes," 12.
[34] Ibid.
[35] Ibid.
[36] Ibid.
[37] Ibid.

the Federal Government "promote" full employment. The Act also created the Council of Economic Advisors (CEA)[38] and the Joint Economic Committee (JEC).[39] At the time, John Patman and other supporters of the original Full Employment Bill probably saw the Employment Act as a necessary but incomplete piece of legislation – something less than perfect – mere intentions. However, the Act would be far more instrumental in the development of U.S. economic policy than Congressman Patman would have ever imagined. The unforeseen significance of the Act was the permanent linkage of U.S domestic policy to full employment, economic growth, and the maintenance of stable prices (low inflation).[40] An unintended and profound consequence of the annual requirement for the President to consult with the CEA and produce a plan consistent with these policies was a focus on meeting short-term economic goals and objectives. Because employment, production and inflation were measurable, statistics were collected quarterly, monthly, and annually. The results were analyzed and incorporated into policy guidance from the CEA to the President. Ultimately, the President's yearly budget, as

[38] The CEA is "an agency within the Executive Office of the President, [and] charged with offering the President objective economic advice on the formulation of both domestic and international economic policy. The Council bases its recommendations and analysis on economic research and empirical evidence, using the best data available to support the President in setting our nation's economic policy. The Council is comprised of a Chair and two Members…The Council is supported by a staff of professional senior economists, staff economists and research assistants, as well as a statistical office." "advisers" have replaced the term "advisors". The White House, "Council of Economic Advisers," The White House, http://www.whitehouse.gov/administration/eop/cea/about/ (accessed March 31, 2009).

[39] The JEC is "a bicameral Congressional Committee composed of ten members from each the Senate and the House of Representatives…Its main purpose is to make a continuing study of matters relating to the US economy…The Committee holds hearings, performs research and advises Members of Congress." U.S. Congress, "Joint Economic Committee," U.S. Congress, http://jec.senate.gov/index.cfm?FuseAction=About.CommitteeBackground (accessed March 31, 2009).

[40] Tasking the Federal Government to promote full employment and stable prices is technically inconsistent. Although a linkage between inflation and unemployment rates had been observed by economists, it wasn't until the 1950's an economist named A.W. Phillips described the relationship. He found that inflation and unemployment rates had historically been negatively related. He demonstrated the explicit trade-off between inflation and unemployment. As shown in the Phillips Curve, there will always be some rate of change in price levels, and some level of unemployment. As seen in World War II, even at full employment there exists a "structural level of unemployment" that cannot be eliminated.

detailed in the Annual Report of the Council of Economic Advisors, provided specific actions the administration would take to promote maximum employment, production, and purchasing power. Thus, the budget became a yearly vehicle for short-term economic policy implementation, based upon prior period economic results. The Employment Act of 1946's consistent focus on short-term results over a long period of time would have a tremendous impact on U.S. domestic and foreign policy in the 1960's and 1970's.

The Great Society and Vietnam – Domestic Dreams Deferred

The Employment Act of 1946 was not the only piece of legislation passed that year, but it would become the most important. The United States had recently concluded World War II and the Congress was working to "insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty."[41] The Act reflected a preference by the Congress to focus resources and efforts in the domestic arena to provide for the welfare of the American people by promoting maximum employment. As with all other legislation, the Congress made a normative judgment about a perceived social problem and chose a particular course of action to address it.[42] Since legislative action is essentially normative by nature, there is a continuum of possible solutions for any given problem. These "solutions" are the net result of judgments made by politicians in the Executive and Legislative branches and then reflected in law, policy, and guidance. Legislation and policy formation is

[41] U.S. Constitution, Preamble.
[42] A "normative" choice is one predicated upon a subjective judgment of value and is concerned with "what should or ought to be." BusinessDictionary.com, http://www.businessdictionary.com/definition/normative-economics.html (accessed March 8, 2009).

effectively a matter of personal preference for one choice or approach over another, and based upon a set of underlying values, beliefs and experience. In President Lyndon Baines Johnson, the United States would find a leader with a preference for domestic policy, hobbled by the primacy of foreign policy, and unable to reconcile either effectively.

When Lyndon Johnson assumed the presidency, he inherited a temperamental economy. In the seventeen years since the passage of the Employment Act of 1946, the United States had experienced three mild recessions during the 1950s and a sluggish, but growing economy.[43] The intervening years had also seen the rise of the Soviet Union as military and economic competitor. The Soviets launched Sputnik in 1957 - to the great amazement of the U.S. public, and consternation of the national leadership. This spurred increased Federal Government investment in math and science programs via passage of the National Defense Education Act.[44] The foreign policy focus on containment of Communism and the Soviet Union was well established. The hysteria of the Cold War provided President John F. Kennedy with a rationale to increase defense spending and adopt the Keynesian approach in managing the economy. In response to the recession of 1960, President Kennedy "began one of the most rapid military buildups in peacetime and planned increased spending on the Polaris and Minuteman missiles…some $17 billion over five years."[45] In line with Keynesian principles designed to promote full employment, "defense expenditures began to creep upward and government purchases in the national income accounts rose to $52 billion in 1963, or 9.1 percent of the GNP

[43] Anthony S. Campagna, *The Economic Consequences of the Vietnam War* (New York: Praeger, 1991), 5.
[44] Ibid.
[45] Ibid., 7.

[Gross National Product]."[46] In addition, at the behest of the Council of Economic Advisors, President Kennedy went to Congress to propose significant reductions in individual and corporate tax rates. However, Congress did not warmly receive the tax reduction package, and the measure stalled. By the end of 1963, the unemployment rate "still hovered around 5.6 percent, and real GNP was growing at a 3.8 percent rate, down from the 6.1 percent rate of a year earlier."[47] Demonstrating acute political acumen, President Johnson championed the tax cuts favored by President Kennedy and persuaded Congress to pass the Revenue Act of 1964.[48] The Revenue Act of 1964 was "the largest tax cut in history to that date."[49] Over the next two years, tax rates declined dramatically. The impact on business and consumer spending was immediately felt in the economy, as more personal disposable income was available. As predicted by Keynesian economists, GNP[50] reached "5.5.percent in 1964, and 6.3 percent in 1965 and unemployment fell to 5.4 percent in December 1964, and to 4.4 percent in December 1964, close to the target rate of 4 percent."[51] By the end of 1964, Keynesians had tamed the U.S. economy. The United States was entering a period of increased economic prosperity that would provide President Johnson the means to conduct his "war on poverty" and support his "Great Society" programs.

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[46] Ibid., 15.
[47] Ibid.
[48] Ibid.
[49] Ibid.
[50] Gross National Product is the "Gross Domestic Product [the value of all goods services produced in a given year] of a country to which income from abroad remittances of nationals living outside and income from foreign subsidiaries of local firms has been added." BusinessDictionary.com, http://www.businessdictionary.com/definition/normative-economics.html (accessed March 8, 2009).
[51] Campagna, *The Economic Consequences of the Vietnam War*, 16.

When President Johnson entered office, he also inherited the political fallout of the Bay of Pigs, the Berlin Crisis, the Cuban Missile Crisis, and a small but growing war in Southeast Asia. In 1963, the total number of U.S. troops in South Vietnam was 16,575 and the annual cost was $414 million.[52] Although ambivalent about the war, President Johnson continued to support the strategy of containment and increased the number of military advisors in South Vietnam to over 23,300 by the end of 1964.[53] Fueled by attacks on the USS Maddox and USS Turner Joy by the North Vietnamese, President Johnson widened the war in Vietnam under the auspices of the Gulf of Tonkin Resolution.[54] The air war over Vietnam began and ground combat troops began to flow into country. By the end of 1965, the number of U.S. military personnel in Vietnam was 184,314 and climbing rapidly.[55] Until then, the aggregate cost of U.S. military involvement in support of South Vietnam had been a respectable, but modest $700 million.[56] The number of troops would increase to 385,300 in 1966, to 485,600 in 1967 and then crest at 543,400 in 1969.[57] Notwithstanding the tremendous social costs, as troops levels increased so did the cost of the war: $1 billion in 1965; $5.8 billion in 1966; $20.1 billion in 1967; and $26.5 billion in 1968.[58] Annual expenditures for the war would reach their zenith in 1969 at $28.8 billion.[59] Total direct costs for the war would

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[52] Ibid., 8.
[53] Ibid., 17.
[54] The Gulf of Tonkin Resolution was passed by Congress on August 10, 1964, signed by President Johnson and became Public Law 88-408. In the resolution, the Congress resolved that it "approves and supports the determination of the President, as Commander in Chief, to take all necessary measures to repel any armed attack against forces of the United States and to prevent all further aggression." Maintenance of International Peace and Security in Southeast Asia, Public Law 88-408, 88th Cong., 2d Sess. August 10.
[55] Campagna, *The Economic Consequences of the Vietnam War*, 30,
[56] Ibid., 10.
[57] Ibid., 30.
[58] Ibid., 83.
[59] Ibid.

reach $111 billion.[60] President Johnson would find, to his great dismay, that his preference for domestic affairs at home would be overshadowed by the war in Vietnam and containment of Communism elsewhere.

President Johnson noted this inherent conflict between his personal preference for domestic affairs and the primacy of foreign affairs when he said:

> If I left the woman I really loved – the Great Society – in order to get involved with that bitch of a war on the other side of the world, then I would lose everything at home. All my programs. All my hopes to feed the hungry and shelter the homeless. All my dreams to provide education and medical care to the browns and the blacks and the lame and the poor. But if I left the war and let the communists take over South Vietnam, then I would be seen as a coward and my nation would be seen as an appeaser and we would both find it impossible to accomplish anything for anybody anywhere on the entire globe.[61]

However, this tension between foreign and domestic affairs was far from President Johnson's mind in 1964. The expanding U.S. economy fostered a belief by President Johnson that a war on poverty and the war in Vietnam were winnable simultaneously. He believed that the demands of domestic and foreign affairs could coexist equally. In a commencement speech at the University of Michigan in May of 1964, President Johnson outlined his domestic agenda, or path to a "Great Society." He remarked, "the challenge of the next half century is whether we have the wisdom to use [our] wealth to enrich and elevate our national life, and to advance the quality of our American civilization."[62] In providing liberty for all, he noted, "we have the opportunity to move not only toward the rich society and the powerful society, but upward to the Great Society."[63] President

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[60] Paul Poast, *The Economics of War* (New York: McGraw-Hill, 2006), 9.
[61] Campagna, *The Economic Consequences of the Vietnam War*, 14.
[62] Lyndon Baines Johnson Library and Museum, "President Lyndon B. Johnson's Remarks at the University of Michigan May 22, 1964," National Archives and Record Administration, http://lbjlib.utexas.edu/Johnson/archives.hom/speeches.hom/640522.asp (accessed March 29, 2009).
[63] Ibid.

Johnson further noted that the Great Society "demands an end to poverty and racial injustice...a place where every child can find knowledge to enrich his mind…where man can renew contact with nature…a destiny where the meaning of our lives matches the marvelous products of our labor."[64] From this initial speech, sprang a series of legislative initiatives and programs designed to ameliorate poverty and social injustice, expand education, restore the environment and renew the urban enclaves of America. Some of the legislation included: The Civil Rights Act of 1964, Economic Opportunity Act of 1964, Elementary and Secondary Education Act of 1965, Housing Act of 1964, and Older Americans Act of 1965.[65] The Department of Health, Education and Welfare, Department of Housing and Urban Development, Food Stamps Program, Medicaid, Medicare, Public Broadcasting Service, and National Public Radio, all resulted from legislation associated with President Johnson's Great Society initiatives. Many of these programs provided relief for the poor, opportunity for the oppressed, and hope for the disenfranchised. Similar to the Social Security Act of 1935, some programs such as Medicare, Medicaid and Food Stamps established recurring entitlement payments to beneficiaries as a matter of law.[66] Although additional mandatory spending was required to fund these programs, everything seemed possible in America.

As President Johnson was reinforcing his commitment to the War in Vietnam, and launching the Great Society, the economy was in the middle of the "fifth consecutive

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[64] Ibid.
[65] Robert Warren Stevens, *Vain Hopes, Grim Realities: The Economic Consequences of the Vietnam War* (New York: New Viewpoints, 1976), 50-51.
[66] The Social Security, Medicare and Medicaid programs are now the three largest Federal Government entitlement programs and "constitute 45 percent of Federal non-interest spending." Chairman of the Council of Economic Advisors, "Economic Report of the President: 2009," Executive Office of the President, http://www.gpoaccess.gov/eop/2009/2009_erp.pdf (accessed March 29, 2009).

year of sustained economic expansion."[67] As with other government programs, there was an economic cost to in order to advance the Great Society. Although the costs were unknown, the American people were willing to shoulder them and believed that everything was possible. Senator Robert F. Kennedy echoed the natural optimism of the American people when he said, "If we are going to meet our responsibilities as a society we must do what needs to be done in Vietnam and what needs to be done at home. We shall fail as a society if we do not do both. And the fact is that we can do both."[68] Both President Johnson and Senator Kennedy had reason on their side as the Council of Economic Advisors reported that the economic future of the United States was bright:

> These [past] four years of expansion have demonstrated that the American economy is capable of sustained balanced growth in peacetime. No law of nature compels a free market economy to suffer from recessions or periodic inflations. As the postwar experience of Western Europe and Japan already indicates, future progress need not be interrupted even though its pace may vary from year to year. We need not judge the life expectancy of the current expansion by measuring the time it has already run. The economy is in good health, and its prospects for continued expansion are in no wise dimmed by the fact that the upswings began four years ago rather than one or two years ago.[69]

In 1965 then, it was no surprise that President Johnson went to the Congress and urged them to "double the money appropriated for the war against poverty."[70] As a member of President Johnson's Council of Economic Advisors, Arthur Okun was more direct when he stated, "the cost of eliminating poverty in the United States is enormous [only] because it strains our will and determination, not because it strains our resources."[71]

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[67] Stevens, *Vain Hopes, Grim Realities: The Economic Consequences of the Vietnam War*, 54.
[68] Ibid.
[69] Chairman of the Council of Economic Advisors, "Economic Report of the President: 1965," Federal Reserve Archival System for Economic Research, http://fraser.stlouisfed.org/publications/ERP/issue/1200/ (accessed March 29, 2009).
[70] Stevens, *Vain Hopes, Grim Realities: The Economic Consequences of the Vietnam War*, 56.
[71] Ibid., 60.

The Keynesian policies applied by the Johnson administration and engendered by the Employment Act of 1946 were paying dividends for the American people in the form of lower unemployment and full employment production. What was not readily apparent in 1965 was that while the economy had been expanding, it was also "at full employment, [and] was not able to accommodate any further increases in demand."[72] The continual retrospective look at short-run economic data had obscured important long-term trends that went unnoticed by the Council of Economic Advisors. Thus, the appropriate and timely adjustments in fiscal and monetary policy needed to manage the economy were difficult to discern. Absent any restraints and changes in fiscal or monetary policy, the economy was therefore subject to inflationary pressures. Necessarily, any additional government spending associated with either the Great Society or the war in Vietnam would cause an increase in aggregate demand and raise inflation. Choices had to be made. America could not do everything at once.

After 1965, any lingering doubt that President Johnson may have had about the primacy of foreign policy over domestic affairs was over. As a result, funding of the war in Vietnam would take precedence over financial support of the Great Society. As the Council of Economic Advisors wrote in the Economic Report of the President in 1966, "national security, of course, has first priority on the budget and the first claim on production."[73] President Johnson affirmed this in his 1966 budget message that stated, "It is budget of both opportunity and sacrifice. It begins to grasp the opportunities of the Great Society. It is restrained by the sacrifices we must continue in order to keep our

[72] Ibid., 54.
[73] Ibid., 56.

defenses strong and flexible."[74] A particularly telling example related to funding the Office of Economic Opportunity (OEO). The OEO was established by the White House, to administer the Great Society programs and saw its budget request reduced from "$3.4 billion to $1.75 billion."[75] The President's budget for 1967 highlighted the primacy of foreign policy in the following way:

> We are determined to press confidently forward toward the Great Society – but we shall do so in an orderly and responsible way, and at a pace which reflects the claims of our commitments in Southeast Asia upon the Nation's resources… [for] it would be folly to present a budget which inadequately provided for the military and economic costs of sustaining our forces in Vietnam.[76]

President Johnson would later say that "losing the Great Society was a terrible thought, but not so terrible as the thought of being responsible for losing a war to the Communists."[77] While President and Congress chose to fund the war in Vietnam at the expense of the war on poverty, they failed to recognize that they could not do both without significantly affecting the economy. In 1967 and 1968 then, it was no surprise that the OEO saw only modest increases in appropriations of $1.5 billion in 1965 to $1.68 and $1.77 billion respectively.[78] By this time, although unstated, President Johnson had lost the war on poverty.

By early 1968, it seemed that no path for success existed for President Johnson in either the domestic or foreign policy arena. The Great Society was still a work in progress. However, it was no longer a promise the Johnson administration could keep. It had become a dream deferred. America had been undergoing a social revolution. The

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[74] Campagna, *The Economic Consequences of the Vietnam War*, 32.
[75] Ibid., 60.
[76] Ibid., 32.
[77] Ibid., 61.
[78] Ibid.

once peaceful civil-rights movement had turned increasingly violent in the South and inner cities. Major race riots had erupted in Detroit, Michigan and Newark, New Jersey the previous year and 1968 did not look to be anymore peaceful. Martin Luther King was assassinated in 1968. Scores of race riots broke out in cities like Washington, D.C. and Baltimore. The social fabric of the country was changing. Much to his dismay, even the robust American economy had faltered. The Tet Offensive in January of 1968 saw the last vestiges of hope for success in Vietnam slip away. Walter Cronkite's fact-finding trip to Vietnam and editorial comments on the evening news in late February concerning the United States' inability to win effectively sounded the death knell for U.S. public support of the war. In March, President Johnson announced that he would not seek reelection and set about winding down his presidency.

No Beneficial Outcomes

It is not clear what would have happened had President Johnson chosen to stand for reelection in 1968. However, it is clear that his tenure in office resulted in significant economic and political costs to the United States that would last throughout the 1970s and into the 1980s. In December of 1974, the noted economist and former member of the CEA , Ezra Solomon wrote that:

> Today, people and governments everywhere are seriously troubled by five anxieties: Inflation and the prospect of more to come…a worldwide recession and the fear that it might develop into a protracted depression…confusion in the international monetary system and the threat of breakdown itself…the threat of shortages and the reality of huge price increases for raw materials, especially those related to energy…[and] record high interest rates and a sharp fall in common stock prices here and elsewhere."[79]

[79] Ezra Solomon, *The Anxious Economy* (Stanford, CA: Stanford Alumni Association, 1975), 1-2.

When commenting on the essential nature of the economic problems at hand, Professor Solomon cited inflation as "the central problem from which all of our problems arise."[80] He noted, "The present…bout of inflation began with U.S. military involvement in Vietnam in 1965. The pre-Vietnam inflation rate of 1 ½ percent doubled to 3 percent in 1966 and 1967, then redoubled to 6 percent in 1969 and 1970."[81] By 1974, the inflation rate was seven times greater than it had been in 1965 and stood at 12%. Economists had been looking backwards, while taking the economy forward, and been surprised where they ended up. A partial explanation for their inability to account for the problem of inflation was the use of select historical data that did not accurately reflect demand or spending patterns. This resulted in the misapplication of corrective fiscal policies. To illustrate, U.S. Government orders for supplies and services had an immediate impact on variable costs as manufacturers purchased supplies, expanded the workforce, and built new facilities. These expenditures immediately increased GNP. However, the long lead-time for some products and services (such as planes, ships and tanks) meant that the Government would not make a payment until some future period. The result was, "when these goods are later delivered to the government, the economic impact has already been felt in the economy – too late to register the economic effects."[82] Another explanation was that politicians and policy makers were unwilling to alienate their constituencies by levying additional taxes for the war in Vietnam or the war on poverty. This resulted in deficits which "were financed through the banking system, and

[80] Ibid., vii.
[81] Ibid., 20.
[82] Campagna, *The Economic Consequences of the Vietnam War*, 19.

led to a rapid increase in the money supply"[83] and resulted in inflation. Quite simply, if Congress had raised taxes to pay for both wars, "aggregate demand would not have run ahead of aggregate supply, and we would not have generated the inflation which did follow. Instead, tax rates were not increased. The extra demand for the two wars was financed indirectly by creating more money."[84]

In addition to inflation, the U.S. economy was plagued with "the highest interest rates in history, [and] a series of balance of payments crises worse than any that had gone before."[85] Additional costs borne by the American populace included a "recession in 1970-71, two serious declines in stock prices (in 1970 and 1972-73, two major liquidity crises at home (in 1966 and 1969-70), [and] a collapse of the housing industry (1966)."[86] These problems resulted from the same short-run economic, political and policy decisions that caused high inflation. In short, there was no effort to pay for the costs of the Great Society, or the war in Vietnam. There was an "absence of any overall economic mobilization machinery to divert resources from civilian to military purposes."[87] The lack of mobilization machinery was also "fully matched by the lack of domestic economic controls of the sort that would have been appropriate to wartime conditions."[88] As a result, "the nation's economy was wrenched this way and that almost continuously because of Washington's Janus-faced policies. The bureaucracy was fighting a real war in Southeast Asia for what it regarded as high stakes, but it did not trust the American

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[83] Ezra Solomon, The Anxious Economy, 31.
[84] Ibid.
[85] Stevens, *Vain Hopes, Grim Realities: The Economic Consequences of the Vietnam War*, 13.
[86] Ibid.
[87] Ibid., 12-13.
[88] Ibid., 13.

people, and by its rhetoric and in its economic policies it sought to persuade the public that nothing very important was going on."[89]

However, nothing could have been further from the truth. Passage of the Employment Act of 1946 was ambitious in intent, but overly focused on short-run economic results and resulting policy guidance. The simultaneous adoption of a Keynesian approach toward management of the economy constrained thoughtful long-term economic analysis, and limited associated policy recommendations. As a result, policy makers implemented the wrong fiscal and monetary policies over 70% of the time.[90] The economic and social costs of the Vietnam War, and the Great Society were neither clearly articulated and understood, nor appropriately passed along to the American public. Instead, hope, optimism and deficit spending were the order of the day. Failure to mobilize the economy and levy the needed taxes to pay for both wars caused significant and permanent economic, social and political damage to the United States. As we shall see in the following chapter, the cumulative unintended consequences of these events would result in political and economic resource constraints that radically altered force planning, and the force structure of the United States Armed Forces. These resource constraints would drive the creation of the All Volunteer Force, the introduction of the Total Force concept and ultimately lead to the requirement for the Individual Augmentation program that exists today.

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[89] Ibid., 12-13.
[90] Keith M. Carlson, "Federal Fiscal Policy Since the Employment Act of 1946," The Federal Reserve Bank of St. Louis Review 69 (December 1987): 14-29.

IV. An All Volunteer Force

Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist.[91]

John Maynard Keynes

The Domestic Reflection of a Foreign Policy Failure

The Total Force Policy was an outgrowth of the economic resource constraints and political challenges the nation faced during the closing years of the Vietnam War. During President Johnson's administration, the draft was used to provide the manpower needed to sustain the war effort. From 1965 to 1969, American troop strength in Vietnam rose to 550,000 men, as the Johnson administration sought to force the North Vietnamese and their Viet Cong allies in the South to either negotiate or abandon their attempts to reunify Vietnam by force.[92] As tangible success in the war eluded President Johnson and his advisors, popular support began to decline for continued U.S. involvement in Vietnam. Public sentiment shifted against the war, and hostility towards the draft became more pronounced. Prominent leaders, academics, students and influential critics framed the draft as an unfair tax foisted upon the poor and disenfranchised – those unable to obtain a deferment. The noted economist, and former advisor to President Kennedy, John Kenneth Galbraith wrote, "The draft survives principally as a device by which we use compulsion to get young men to serve at less than the market rate of pay. We shift the cost of military service from the well-to-do

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[91] Sedulia's Quotations, "Keynes on practical men as slaves of some defunct economist," Sedulia's Quotations, http://sedulia.blogs.com/sedulias_quotations/2006/08/keynes_on_pract.html/ (accessed March 28, 2009).

[92] David W. Hogan, Jr., *Centuries of Service: the U.S. Army 1775 – 2004* (Washington, D.C.: Center of Military History, 2004), 27 http://www.history.army.mil/books/COS/27-34.htm (accessed February 27, 2009).

taxpayer who benefits by lower taxes to the impecunious young draftee."[93] The topic of the draft was so pronounced in the national media during 1968 that it provided a valuable platform for Richard Nixon to offer his views on the subject. During the presidential campaign, Richard Nixon promised to end the draft, which he saw as both procedurally and fundamentally unfair. In his words, "It is not so much the way they [draftees] are selected that is wrong, it is the fact of selection."[94] In voicing his opposition to the draft during the 1968 campaign, Richard Nixon energized a vocal and active portion of the electorate concerned with not only ending the draft, but also the very costly and unpopular war in Vietnam.

President Nixon's Shifting Priorities

Only days after his inauguration, on January 29, 1969, President Richard M. Nixon wrote a memorandum to Secretary of Defense Melvin Laird stating that "It is my firm conviction that we must establish an all-volunteer armed force after the expenditures for Vietnam are substantially reduced…I request that you begin immediately to plan a special Commission to develop a detailed plan for ending the draft."[95] In order to address the issue of conscription, he established a commission to investigate the feasibility of a volunteer military. The formal name of the commission was the Commission on an All-

[93] John Kenneth Galbraith; quoted in Walter Y. Oi, "All-Volunteer Military Was a Highlight of Nixon's Presidency," Ney York Times, May 1, 1994.
[94] Ibid.
[95] President of the United States Richard M. Nixon, [Establishment of an All-Volunteer Armed Forces Commission], memorandum for Melvin R. Laird, Secretary of Defense, Washington, D.C., January 29, 1969, http://www.rand.org/pubs/monographs/MG265/images/webG1156.pdf (accessed February 22, 2009).

Volunteer Armed Force.[96] This commission was led by former Secretary of Defense, Thomas S. Gates and became know as the "Gates Commission." The Gates Commission released their report in February of 1970 and wrote unanimously "that the nation's interest will be better served by an all-volunteer force, supported by an effective stand-by draft, than by a mixed force of volunteers and conscripts."[97] They also concluded that a move to an all volunteer force was feasible, "would be economically viable and potentially more effective."[98] When presented with the report, President Nixon "expressed enthusiasm and sympathy for an all-volunteer force, making the point that even a reformed draft is unfair."[99] This was the genesis of the Total Force concept.

In response to President Nixon's direction, Defense Secretary Laird laid the foundations for the Total Force concept when he issued a memorandum to the Military Departments and Joint Chiefs of Staff in August of 1970 that stated:

> The President has requested reduced expenditures during Fiscal Year 1971 and an extension of these economies into future budgets. Within the Department of Defense these economies will require reductions in over-all strengths and capabilities of the active forces, and increased reliance on the combat and combat support units of the Guard and Reserves…Emphasis will be given to the concurrent consideration of the total forces, active and reserve, to determine the most advantageous mix to support national strategy and meet the threat. A total force concept will be applied in all aspects of planning, programming, manning, equipping, and employing the Guard and Reserve forces…that in many instances the lower peacetime sustaining costs of reserve force units, can result in a larger

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[96] Martin Anderson, Memorandum for the President's File, "Meeting with the President's Commission on An All-Volunteer Armed Force," February 21, 1970, http://www.rand.org/pubs/monographs/MG265/images/webG1156.pdf (accessed February 22, 2009).
[97] Bernard Rostker, *I Want You!: The Evolution of the All-Volunteer Force* (Santa Monica, CA: RAND, 2006), 4.
[98] President of the United States George W. Bush, "30th Anniversary of the All-Volunteer Force," http://georgewbush-whitehouse.archives.gov/news/releases/2003/07/print/20030701-11.html (accessed February 26, 2009).
[99] Martin Anderson, Memorandum for the President's File, "Meeting with the President's Commission on An All-Volunteer Armed Force," February 21, 1970, http://www.rand.org/pubs/monographs/MG265/images/webG1156.pdf (accessed February 22, 2009).

> total force for a given budget or in the same size force for a lesser budget…Guard and reserve units and individuals of the Selected Reserves will be prepared to be the initial and primary source for augmentation of the active forces in any future emergency requiring a rapid and substantial expansion of the forces.[100]

Not only were the use of the Guard and Reserve to be cost effective, they were to be the "initial and primary source of augmentation of the active forces in any future emergency requiring a rapid and substantial expansion of the active forces."[101] Secretary Laird further elaborated on the expected economies using the Total Force concept in testimony before the Senate Armed Services Committee. He testified that "our need to plan for optimum use of all military and related resources available to meet the requirements of the Free World…[the] 'Total Force' include both active and reserve components of the U.S."[102] While primarily an outgrowth of President Nixon's desire to end the draft, the move to the Total Force concept was aimed at a reduction in military spending resulting from a confluence of ending the draft and the additional costs associated with standing-up an All-Volunteer Force. Although the move to the AVF reduced the active duty military size from 3.065 million to 2.128 million between 1970 and 1975, the expected cost savings never materialized.[103] While expected, the additional costs of retaining and recruiting enlisted personnel in the all-volunteer force would account for a pay increase of approximately 60%.[104] Further amplification of the policy and structure for the Total

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[100] U.S. Secretary of Defense Melvin R. Laird, "Support for Guard and Reserve Forces," memorandum for Secretaries of the Military Departments, Washington: D.C., August 21, 1970; quoted in Congress, Senate, Senator Ellender of Louisiana speaking on the Reliance of National Guard and Reserve Forces to Meet the Requirements of Active Military Forces for Additional Personnel, 91st Cong., 2nd sess., *Congressional Record*: 30968.
[101] Ibid.
[102] U.S. Secretary of Defense Melvin R. Laird, speaking on the Department of Defense Authorization for Fiscal Year 1972, to the Senate Armed Services Committee, 92nd Cong., 2nd sess., *Congressional Record*: 3843.
[103] See Appendix B: Department of Defense Manpower Statistics.
[104] Stevens, *Vain Hopes, Grim Realities: The Economic Consequences of the Vietnam War*, 147.

Force Concept would wait until the appointment of Melvin Laird's successor, James Schlesinger.

After much debate, the Nixon Administration and Congress allowed the authority for the draft to lapse, and the All-Volunteer Force was created.[105] In a memorandum dated August 23, 1973, Secretary Schlesinger turned the Total Force concept into policy. In the memorandum, he wrote, "the Total Force is no longer a 'concept'. It is now the Total Force Policy which integrates the Active, Guard and Reserve forces into a homogeneous whole."[106] In addition, Secretary Schlesinger reaffirmed the roles for the Guard and Reserve noting that, "It must be clearly understood that implicit in the Total Force Policy…is the fact that the Guard and Reserve forces will be used as the initial and primary augmentation of the active forces."[107] The social, political and economic costs associated with the Vietnam War were significant and had taken their toll on the American public. There was no longer an appetite for continually increasing military spending, and the maintenance of a large standing army sufficient to handle all contingencies without use of the Guard and Reserve components. The Schlesinger memorandum was an explicit recognition of the "costs" of the Vietnam War – economic and otherwise. In view of the economic and social costs of the war, General Creighton W. Abrams would further codify the Total Force Policy and make it his own by linking the use of the reserves to the "national will."

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[105] President of the United States George W. Bush, "30th Anniversary of the All-Volunteer Force," http://georgewbush-whitehouse.archives.gov/news/releases/2003/07/print/20030701-11.html (accessed February 26, 2009).

[106] Secretary of Defense James R. Schlesinger, "Readiness of the Selected Reserve," memorandum for Secretaries of the Military Department, Washington: D.C., August 23, 1973; quoted in Congress, Senate, Senator Goldwater of Arizona speaking on the Department of Defense Appropriation Authorization Act of 1974. H.R. 9286. 93rd Cong., 1st sess., *Congressional Record*: 31071.

[107] Ibid.

The Abrams Doctrine – Harnessing the Total Force

In March of 1974, General Abrams, who was then the Army Chief of Staff, published a plan to field 16 Army divisions. Nominally, this represented a growth of three divisions. However, what was unique was that the plan called for a "reliance on the reserves such that the force could not function without them, and hence could not be deployed without calling them up."[108] Whether or not he intended it, General Abrams' plan imputed the maintenance of political will to the fielding of the U.S. Armed Forces – to include the Reserves – and the possibility of success. Colonel Harry Summers articulated the linkage between the will of the people, the military and the government when he wrote that, "it would be an obvious fallacy to commit the Army without first committing the American People."[109] Colonel Summers further noted that when the Army was used, "such a commitment would require battlefield competence and clear-cut objectives to be sustained, but without the commitment of the American people, the commitment of the Army to prolonged combat was impossible."[110] Many in the defense establishment believed that President Johnson's failure to mobilize the Reserves was a significant factor in the U.S. defeat in Vietnam. As early as 1965, Defense Secretary Robert S. McNamara presented President Johnson a plan for the mobilization of 100,000 Guard and Reserve members. Not mobilizing the Guard and Reserve in the time of war was in direct contravention of past practice in that the U.S. would "fight not as past wars had been fought with the public fully aware of the commitment and behind the fighting

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[108]Lewis Sorley, *Thunderbolt: General Creighton Abrams and the Army of His Times* (New York: Simon & Schuster, 1992), 362-64.
[109] Harry G. Summers, *On Strategy: A Critical Analysis of the Vietnam War* (Novato, CA: Presidio Press, 1982), 13.
[110] Ibid.

man."[111] President Johnson's critics also argued that the failure in Vietnam was exacerbated by the damage done to the institutional army and erosion of the civil-military relationship when the Guard and Reserve were not mobilized. In General Abrams' use of the Total Force to field additional divisions, observers saw a solution to the problems associated with the maintenance of political will and the use of U.S. Armed Forces. The employment of the Guard and Reserve was the connection between foreign policy decisions made in Washington with virtually every town, village, and city in the United States. Because all politics are essentially local, feedback on the inappropriate use of the Guard and Reserve would be immediately felt at the congressional level and require some response from the White House. The linkage between use of the Guard and Reserves and the political will of the nation was a powerful and tangible one. As a result, the Total Force concept that started with Secretary Laird and later codified as the Total Force Policy by Secretary Schlesinger, was ultimately given permanence and named the "Abrams Doctrine."

The Cold War – Waiting in Reserve

During the Cold War, the focus of main effort for the U.S. Armed Forces continued to be containment of the Soviet Union and Communism. This overarching policy was embraced and practiced in various ways by Presidents Jimmy Carter, Ronald Reagan and George H.W. Bush. At the heart of the military aspect of containment were the twin concepts of deterrence and "mutually assured destruction." The possession of

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[111] Deborah Shapley, *Promise and Power: The Life and Times of Robert McNamara* (Boston: Little, Brown, 1993), 345.

nuclear weapons by both the U.S. and Soviet Union provided the basis for deterrence of large-scale military conflict between the two nations. The prospect of mutually assured destruction from a global thermonuclear exchange between the U.S. and Soviet Union raised the stakes so significantly for survival that rational behavior became the norm. A stable, if at times tense, relationship between the U.S. and Soviet Union developed, with conflict limited to support of proxies and limited intervention in the developing world. During this period, the military largely focused on training, readiness and modernization in support of the North Atlantic Treaty Organization (NATO) in order to defend Western Europe from attack by the Soviet Union. When addressed, the Total Force policy was used as a vehicle to promote the proper training and equipping of the Guard and Reserve in order to ensure their readiness during a national emergency. On June 21, 1982, Secretary of Defense Caspar Weinberger elaborated this on point in a memorandum concerning equipment shortages where he stated, "the Total Force Policy clearly established that National Guard and Reserve Forces 'will be used' should this country enter into armed hostilities…units that fight shall be equipped first regardless of component. Therefore, Active and Reserve Components deploying at the same time should have equal claim on modern equipment."[112] The prospect for a large-scale war or contingency requiring implementation of the Abrams Doctrine remained possible, but not probable. In practice, this meant that the U.S. relied on the active military to address day-to-day concerns and contingencies, with the reserve in a supporting "strategic reserve" role, standing by for use in a large conflict.

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[112] Jennifer Buck, "A Total Force Policy for the Operational Reserve," Senior Army Reserve Commanders Association, http://www.sarca.us/meeting_feb07/briefings/Buck_operationalreserve.pdf (accessed February 26, 2009), 16.

Globalization and the Peace Dividend – The Military Does Windows

The fall of the Berlin Wall, collapse of Communism, and advent of globalism in the 1990s signaled a dramatic shift in U.S. foreign policy and domestic priorities. While the notion of a nuclear holocaust became more remote, employment of U.S. military forces worldwide increased significantly. As the sole remaining "superpower", the U.S. found itself reluctantly playing the role of a global policeman. At home, the prospect of unlimited economic prosperity and growth fueled a desire to focus on what had traditionally been the business of America – business. Without a foe, the U.S. found itself looking for a "peace dividend" and began the process of downsizing the military. While surprised by the invasion of Kuwait by Iraq, the U.S. was trained, ready and able to defeat Saddam Hussein's forces. It was the first time since the Cuban Missile Crisis that the Guard and Reserve mobilized and the first test of the Abrams Doctrine since its creation. The war was short, successful and validated the concept of employment of the Guard and Reserve as a "strategic reserve." Subsequent to victory in the Gulf War, the drawdown of U.S. forces continued at a robust pace and "doing more with less" became a common refrain among the Services.

The election of President William J. Clinton saw a world increasingly in flux. The rise of democracy, capitalism, increased concern for human rights and expanding free trade were all positive benefits reaped from the collapse of the Soviet Union and bankruptcy of Communism as an ideology. However, the resurgence of ethnic hatred, tribal rivalries, religious conflict and crushing poverty were also products of a world no longer dominated by conflict between two superpowers. Still acting as the world's

policeman, the U.S. military found itself deploying overseas more often, and doing more with less - literally. While the number of deployments increased during President Clinton's time in office, the size of the active duty military decreased from 1.807 million to 1.386 million – almost 25%.[113] Concurrently, the Guard and Reserve moved away from a limited-use model in support of a general large-scale war to that of an enabler of "Military Operations Other Than War (MOOTW)."[114] Secretary of Defense William J. Perry echoed these thoughts in an April 1995 memorandum on the "Increased Use of Reserve Forces in Total Force Missions" when he wrote "we need to…capitalize on Reserve Component capabilities to accomplish operational requirements while maintaining their mission readiness for overseas and domestic operations."[115] During President Clinton's two terms, the military was called upon to provide support to operations around the globe. From Albania, to the Central African Republic, Liberia to Iraq, the Congo to Haiti and elsewhere, the U.S. deployed forces to support a host of missions from peacekeeping and peace enforcement to non-combatant evacuation operations to raids, strikes and humanitarian assistance.[116] As always, the sheer

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[113] See Appendix B: Department of Defense Manpower Statistics.

[114] As defined at the time, MOOTW were operations that "encompass the use of military capabilities across the range of military operations short of war. These military actions can be applied to complement any combination of the other instruments of national power and occur before, during, and after war." U.S. Department of Defense, *Department of Defense Dictionary of Military and Associated Terns,* [as amended November 30, 2004], Washington, D.C., Joint Publication 1-02, November 30, 2004, 336. http://www.asafm.army.mil/pubs/jp1-02/jp1-02.pdf (accessed February 14, 2009).

[115] Buck, "A Total Force Policy for the Operational Reserve," 16.

[116] As detailed in Congressional Research Report RL30172 , some of the locales, deployments and operations include the former Yugoslav Republic of Macedonia as part of the UN Protection Force, Operation Uphold Democracy in Haiti, Operation Deliberate Force against the Bosnian Serbs, evacuations from Liberia, the Central African Republic and Sierra Leone, Operation Infinite Reach in Afghanistan and Sudan, Operation Allied Force for Kosovo and East Timor as part of United Nations Transitional Administration in East Timor (UNTAET), Operations Desert Fox , Southern Watch and Deny Flight in Iraq.

magnitude of the costs associated with providing for the national defense invited a healthy dose of review by the auditors, pundits, politicians and others looking for an additional share of discretionary spending authority. Hence, Secretary Perry's comment that "increased reliance on Reserve Components is prudent and necessary in future policy, planning and budget decisions."[117] If the beginning of the 1990's saw a return to isolationism and a focus at home, the balance of the 1990's could have been characterized as "engagement everywhere, all the time." This was effectively articulated by President Clinton's second Secretary of Defense, William Cohen, when he wrote, "our goal, as we move into the 21st Century, must be a seamless Total Force that provides the National Command Authorities the flexibility and interoperability necessary for the full range of military operations."[118]

Although President Clinton stretched the military thin, the Total Force remained a viable and welcome construct for force planning. The international challenges the U.S. faced were varied and diverse. The missions given the military were both taxing for families at home and the Soldiers, Sailors, Airmen and Marines deployed down range. While performing non-traditional missions might not have been a favorite military pastime, the Total Force demonstrated the capacity to perform a range of missions along the spectrum of conflict. Moreover, the U.S. military continued to exhibit an asymmetric technology advantage everywhere it went. Even NATO allies had a hard time keeping up with U.S. forces that seemed to be operating in the dark more effectively than during the day. It appeared that the U.S. military had it all – capability, capacity and durability.

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[117] Jennifer Buck, "A Total Force Policy for the Operational Reserve," 16.
[118] Ibid.

The election of George W. Bush to the Presidency in 2000, and the appointment of Donald Rumsfeld as Secretary of Defense ushered in an era of transformation within the Department. Secretary Rumsfeld championed best business practices to remake the DOD into a more efficient organization, while also looking to technology to provide increases in kinetic capability at a lower cost, using a smaller human footprint. Had it not been for the attacks of September 11, 2001, the Total Force may have been regarded as a thoughtful and rational force planning model, well devised, and equally useful in any scenario. What OEF and OIF exposed was that while the Total Force had capacity and capability, it was not equally durable across the range of military operations. The Total Force was not structured, organized or manned to perform continuous large-scale combat operations for longer than 12 to 24 months without significant institutional strain. By 2003, the economic, political and institutional realities of fighting the Total Force were taking their toll on the military and the nation at large. In July of 2003, Secretary Rumsfeld wrote that the Military Departments should "structure active and reserve forces to reduce the need for involuntarily mobilization of the Guard and Reserve. Eliminate the need for involuntary mobilization in the first 15 days of a rapid response operation…Structure forces in order to limit involuntary mobilization to not more than one year every 6 years."[119] The memo was recognition of the fact that there were costs associated with relying on active and reserve forces for a prolonged period: economic, political and operational. What had become apparent to Secretary Rumsfeld, the Services and the Department of Defense, was that an adequate number of personnel with HD/LD skills sets needed to fill USCENTCOM's requirements did not exist. Moreover, the

[119] Ibid.

personnel with HD/LD skills were being worn-out at a pace commensurate with that of Army and Marine ground combat troops. What had happened?

The All Volunteer Force - Assumptions Matter and Facts Change

When President Nixon established the AVF and implemented the Total Force concept, the implications seemed obvious. First, no readily available large pool of relatively low-cost labor would be available for military service unless Congress initiated the stand-by draft – a dim prospect at best. Second, the lack of military manpower at below market rates meant that force planning had to be considered at full cost Further, since the cost of military manpower would rise, force planning decisions would require greater trade-offs between the amount of risk assumed and the amount of defense purchased . Third, the Guard and Reserve were a relatively inexpensive way in which to hedge risk at an acceptable financial cost. Given these facts, President Nixon and Secretary Laird chose to purchase a military force with a smaller active duty component, for a lesser nominal cost, and lay off additional risk on the Guard and Reserve. The underlying assumption was that the risk of a large-scale war with the Soviet Union was a low probability event. Thus, the relative projected cost of buying more Guard and Reserve support was economically advantageous. In fact, the less the Guard and Reserve were used, the more cost advantageous they became. Paradoxically, the Guard and Reserve were most valuable if they remained a strategic reserve and operated one weekend a month and two weeks a year. In contrast, the active duty component was sized, structured and tasked to perform the full range of military operations on a routine and recurring basis. The active duty component had the capability and infrastructure

necessary to operate at the tactical, operational and strategic levels of war over a prolonged period, with or without the organizational contributions of the Guard and Reserve. The same was not true of the Guard and Reserve.

Unfortunately, the flaws and unintended consequences of this force planning construct went unnoticed, ignored, or were assumed away by policy makers, planners and the Executive Branch. First, the Total Force was built with a plug and play approach that linked the operational usage of the Guard and the Reserve to incorporation into existing active duty organizations and infrastructure. The underlying assumption was that the required organizational and physical infrastructure would continue to exist into the future. Second, the value proposition assigned to the Guard and Reserve suggested that their value increased as their usage declined. The underlying assumption here was that with the exception of large-scale general war with the Soviet Union, the active duty was sufficiently sized and structured for the defense needs of the United States. Third, the belief that collective security provided a basis for the divisibility and distribution of risk among partners as required by the U.S. The truth was that collective security was not always collective in nature, or divisible in practice due to "free ridership" and the inability to easily deny it to others, i.e. France's secure position in Europe after ceasing to provide forces for NATO. Fourth, a superpower struggle with the Soviet Union would continue and provide the needed rationale for force planning into the future. The truth was that force planning is much simpler in a bipolar world where the threat is known and a correlation of forces possible.

In retrospect, the reason why the Total Force was not structured, organized or manned to perform continuous large-scale combat operations for longer than 12 to 24

months without significant institutional strain is clear. The failure to validate facts, challenge assumptions, and form new premises based upon fresh inquiry resulted in erroneous conclusions regarding the continued viability of the assumed organizational roles and capabilities of the active duty, Guard and Reserve. The assumption that the world would continue to be dominated by an ideological struggle represented by the United States and Soviet Union was the foundation upon which the Total Force construct was built and maintained. The answers to essential questions concerning the appropriate size and structure of the military, the acquisition of weapons systems and platforms were all predicated upon the ability to identify a threat. Without the ability to identify a threat, the nature of force planning in the United States became exponentially more difficult. Thus, when peace broke out after the fall of the Berlin Wall, it seemed prudent to reduce defense spending. However, the lack of a credible competitor left resource allocation decisions vague, nebulous, and unsatisfying. In the end, Presidents George H.W. Bush and Bill Clinton reduced the size of the active duty military from 2.1 million in 1989, to 1.38 million in 2000.[120] At some point in the process of downsizing the active duty forces and eliminating force structure, the stable relationship between the roles, missions and capabilities of the active duty, Guard and Reserve changed.

[120] See Appendix B: Department of Defense Manpower Statistics.

V. Individual Augmentation

The use of Individual Augmentees is a pick-up game…it is not the best way to form, or run a staff.[121]

Lieutenant General Stanley McChrystal

The most valuable officer in the military today is an 0-4 Intelligence Officer…there are just not enough to go around…every staff wants more Intel IAs.[122]

Major General Robert E. Schmidle

The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds.[123]

John Maynard Keynes

Individual Augmentation – A Response to Missing Force Structure

The stable relationship that had existed since President Nixon had created the Total Force was based on the premise that Guard and Reserve units were to augment active duty forces.[124] As a result, the Total Force was built around the incorporation of Guard and the Reserve units into existing active duty organizations and infrastructure. This was important for two reasons. First, a large percentage of units found in the Guard and Reserve were Combat Support (CS) and Combat Service Support (CSS) units.[125]

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[121] Lieutenant General Stanley McChrystal, "Leadership in the Joint Environment" [lecture, Joint Forces Staff College, Norfolk, VA, February 20, 2009].
[122] Major General Robert E. Schmidle, "The Quadrennial Defense Review" [lecture, Joint Advanced Warfighting School, Norfolk, VA, October 29, 2008].
[123] The Quotations Page, "Quotations by Author: John Maynard Keynes," The Quotations Page, http://www.quotationspage.com/quotes/John_Maynard_Keynes/ (accessed March 28, 2009).
[124] U.S. Secretary of Defense Melvin R. Laird, "Support for Guard and Reserve Forces," memorandum for Secretaries of the Military Departments, Washington: D.C., August 21, 1970; quoted in Congress, Senate, Senator Ellender of Louisiana speaking on the Reliance of National Guard and Reserve Forces to Meet the Requirements of Active Military Forces for Additional Personnel, 91st Cong., 2nd sess., *Congressional Record*: 30968.
[125] Combat Support (CS) is comprised of those functions found in the Chemical Corps, Corps of Engineers, Military Intelligence Corps, Military Police Corps, Signal Corps, and selected Army Aviations elements. Combat Service Support (CSS) includes the following functions: logistics, transportations, ordnance, medical, financial, religious, human resources, and legal.

These units operated as parts of larger units and formations and required both physical and organizational infrastructure in which to integrate. Second, CS and CSS units provided the enabling functions necessary for the Army to deliver combat capability at the tactical, operational, and strategic levels of war. If combat units were the "tooth", then CS and CSS units were that "tail" that kept the Army on the move and engaged in the fight. These CS and CSS units were predominantly composed of Military Occupations Specialties that are classified HD/LD today. The key assumption beneath the ability of Guard and Reserve units to incorporate into active duty units was the expectation that the necessary organizational and physical infrastructure would continue to exist into the future. Thus, under the Total Force construct, a Reserve or Guard CS or CSS unit assigned duties at an active duty Corps or Division Headquarters had an expectation that they would be able to fall into an existing organization.

Unfortunately, the reduction in active duty end strength that accompanied the peace dividend of the 1990's resulted in the elimination of both supporting units and infrastructure needed to receive and incorporate Guard and Reserve units. However, the more important impact was the elimination of critical CS, CSS and the related Command and Control (C2) infrastructure within the Army in particular. Because CS, CSS and C2 functions were inherently people intensive, the impact of personnel and force structure cuts was more widely felt in these units than in combat units. Using a notional tooth-to-tail ratio of 1 to 7[126] as a guide, the estimated impact on the Army between 1989 and 2000 was the elimination of 252,000 CS and CSS positions, as compared to only 36,000

[126] The Atlantic, "The Army We Have," The Atlantic, http://www.theatlantic.com/doc/200706/mockenhaupt-army (accessed February 11, 2009).

Combat Arms positions.[127] It was the drawdown of this CS and CSS capability that effectively limited the Total Force from performing continuous large-scale combat operations for longer than 12 to 24 months without significant institutional strain. The unknown and unintended consequence of the peace dividend was ironically responsible for leaving the U.S. with a far superior fighting force, but hamstrung by the lack of institutional and organizational infrastructure needed to operate effectively at the operational level of war over the long-term without the use of contractors, Third Country Nationals (TCNs) and coalition partners. Ultimately, this missing force structure, and the impact on mission success, was recognized during the drawdown and resulted in the creation of the Individual Augment program.

By 1995, the process of deploying forces worldwide to support a range of operations from peacekeeping to non-combatant evacuations and humanitarian assistance missions increasingly required the active duty to request the assistance of Guard and Reserve forces. In the process, the Guard and Reserve moved away from a limited-use model in support of a general large-scale war to that of an enabler of MOOTW operations. By necessity, the Guard and Reserve was becoming an "operational reserve." In April of 1995, Secretary of Defense William J. Perry codified the need to move the Guard and Reserve away from the traditional strategic reserve role into an operational role.[128] In issuing his guidance, Secretary Perry was keenly aware that the downsizing of the active duty military was having a significant impact on the ability of U.S. forces to perform all of the requested missions given the lacking force structure. Just as creation of

[127] In 1989, Army active duty end strength was 770,000 and by 2000, it had decreased to 482,000 – a decrease of 288,000 people. See Appendix B: Department of Defense Manpower Statistics.
[128] Buck, "A Total Force Policy for the Operational Reserve," 16.

the All-Volunteer Force had required economic trade offs that translated into changes in force structure and risk allocation to the Guard and Reserve, so did the peace dividend. Quite simply, the force structure missing in the active duty would be replaced by substituting in Guard and Reserve forces. As part of the Total Force, Secretary Perry redistributed the additional risk associated with a smaller force structure to the Guard and Reserve, at an acceptable financial cost. Arguably, with the reduced CS and CSS support came the realization that a single Service was unlikely to have all of the capability and capacity necessary for a CCDR or JFC to conduct large joint operations. What was needed was a vehicle to provide the CCDR with the additional temporary manpower needed to conduct operations. As a result, the Individual Augment program was created by issuance of an instruction from the Chairman of the Joint Chiefs of Staff.

The Individual Augmentation Construct – Hope and Reality

The Individual Augment concept that exists today was first articulated by the Chairman of the Joint Chiefs of Staff (CJCS) January 1996 instruction concerning temporary duty assignment to a Combatant Command.[129] The instruction established the procedures and policy for the "joint military community regarding the assignment of individuals to meet combatant command temporary duty (TDY/TAD) requirements in support of National Command Authorities (NCA) directed operations."[130] The instruction reiterated the primacy of the CCDR and stated, "combatant commands determine the need for forces to accomplish an assigned mission and fill operational or

[129] Chairman of the Joint Chiefs of Staff, *Policy and Procedures to Assign Individuals to Meet Combatant Command Mission Related Temporary Duty Requirements*, CJCS Instruction 1301.01, January 16, 1996, 1.
[130] Ibid.

contingency requirements through their Service component commands."[131] The instruction directed each of the Services to provide the necessary personnel in support of NCA directed operations.[132] If the Services disagreed with the request from the CCDR, they were able to submit a reclama[133] to the Chairman of the Joint Chiefs of Staff (JCS). In 1996, the Chairman reissued the instruction with minor procedural changes incorporated.[134] In July of 2001, CJCS reissued an expanded and revised instruction to incorporate doctrinal changes and guidance contained in Joint Publications 1-0, 3-0, and 5-0.[135] In January of 2004, CJCS issued the guidance currently in use today.[136] In reissuing the instruction, the Chairman's intent was to ensure that "IA positions are consistent with strategic policy…[and] provide the best-qualified, available Service member or Department of Defense civilian to the supported [CCDR] in a timely manner."[137] The instruction also provided for additional mechanisms to "ensure the accountability of individuals filling IA positions."[138] In October of 2006, United States Joint Forces Command (USJFCOM) assumed responsibility for the management and

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[131] Ibid

[132] The requirement to provide forces is more specifically detailed in the DoD Directive concerning the functions of the Department of Defense. It states, "subject to the authority, direction and control of the Secretary of Defense, the Secretaries of the Military Departments are responsible...for carrying out the functions of the Military Departments so as to fulfill (to the maximum extent practicable) the current and future operational requirements of Combatant Commands." U.S. Department of Defense, *Functions of the Department of Defense and Its Major Components*, DoD Directive 5100.1, August 1, 2002.

[133] A "reclama" is a "request to duly constituted authority to reconsider its decision or its proposed action." U.S. Department of Defense, *Department of Defense Dictionary of Military and Associated Terns,* [as amended October 17, 2008], Washington, D.C., Joint Publication 1-02, October 17, 2008, 456.

[134] Chairman of the Joint Chiefs of Staff, *Policy and Procedures to Assign Individuals to Meet Combatant Command Mission-Related Temporary Duty Requirements*, CJCS Instruction 1301.01A, October 30, 1998.

[135] These Joint Publications covered areas such as personnel support for joint operations, joint operations and planning for joint operations. Chairman of the Joint Chiefs of Staff. *Policy and Procedures to Assign Individuals to Meet Combatant Command Mission-Related Temporary Duty Requirements*. CJCS Instruction 1301.01B. July 1, 2001.

[136] Chairman of the Joint Chiefs of Staff, *Individual Augmentation Procedures*, CJCS Instruction 1301.01C, January 1, 2004.

[137] Ibid., 1.

[138] Ibid., 1.

assignment of IAs as the joint force provider.[139] Since 1996, the policies and procedures used to source personnel to fill unfunded temporary manpower requirements in support of assigned missions have changed; however, the Service requirement to fill those positions has not. Although the IA program has been useful in relieving short-term manpower shortages, it is not a viable substitute for the missing CS , CSS and C2 support personnel and organizational infrastructure needed to continuously regenerate combat capability for use at the operational level of war.

While the wars in Iraq and Afghanistan have demonstrated the kinetic capabilities and technical prowess that U.S. forces can bring to bear on an opponent, they also highlight the difficulty in conducting operations over a prolonged period. Due to the land-centric nature of the fight, the majority of operational commands in Iraq and Afghanistan (with the exception of ISAF) are built and staffed using Army Corps or Division Headquarters as the core element for C2. Due to force structure limitations, Division and Corps Headquarters are not normally manned at full strength and require augmentation from IAs. Despite the assignment of Navy and Air Force personnel to fill IA billets, the force structure is neither large enough nor flexible enough to provide CDRUSCENTCOM with fills for all JMD requirements.[140] As a result, "persistent shortfalls" exists in many HD/LD skills sets.[141] The de facto existence of persistent shortfalls in HD/LD skills sets is demonstrable proof of the force structure imbalance in

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[139] LCDR Norman Macgregor, United States Fleet Forces Command – N1P14, interview by author via telephone, February 17, 2009.

[140] A partial explanation is that not all Navy and Air Force personnel eligible to serve as IAs are sent to fill staff positions due to assignment to non-standard Ad-Hoc and In-Lieu-Of missions such as Provincial Reconstruction Teams (PRTs), Military Training Teams (MTTs) or Embedded Training Teams (ETTs).

[141] Persistent shortfalls exist in most HD/LD communities including explosive ordnance disposal, intelligence, civil affairs, electronic warfare, engineering and military police. Theresa S. Reisenfeld, Chairman of the Joint Chiefs of Staff J-1 Division, interview by author via telephone on February 27, 2009.

the U.S. Armed Forces today, and the basis for current operational limitations and institutional strain on the Services. The demand for intelligence capabilities in the current conflict are illustrative of why this is so.

The Force Structure Conundrum

If we were to construct a notional demand curve for intelligence support across the continuum of conflict from domestic disaster relief through counterinsurgencies and strategic nuclear war, it might look like Figure 2 below.[142] Using the "find, fix and finish" model as an example, the level of capability required to execute a show of force is something less than required for a limited conventional conflict, or counterinsurgency. The level of effort and resources required to find an armored division in open desert is relatively low given the nature of the target. The same is not true in a counterinsurgency (COIN) environment when the target is a network or single individual like Abu Musab al-Zarqawi. In this instance, a disproportionate amount of effort and resources are required to find the target. The question then becomes, what is the appropriate force structure for intelligence capabilities within the U.S. Armed Forces across the Range of Military Operations (ROMO). At what level should the base capability be set, and at what level can capability and resources be surged to meet temporary demand spikes? The current force structure suggests that the U.S. Armed Forces are capable of conducting intelligence operations across the ROMO for 12 to 24 months.[143] If the U.S. is capable of

[142] Demand curve developed through interviews conducted with an Air Force Intelligence Officer, February 9, 2009.
[143] Ibid.

conducting intelligence operations across the ROMO for 12 to 24 months, why is there a persistent capability shortfall?

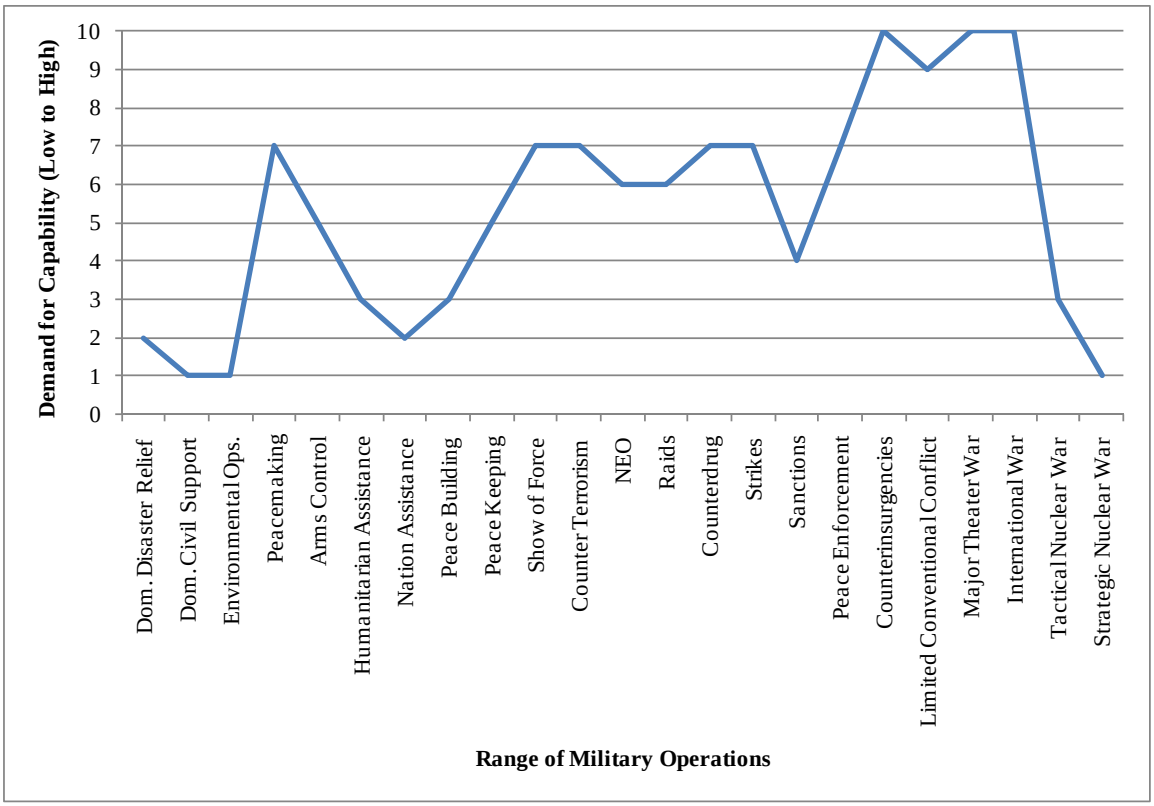

Figure 2: Demand Curve for Intelligence Support

The answer is twofold. First, once operations in Iraq and Afghanistan shifted to counterinsurgency operations, the demand for intelligence support increased significantly. This resulted in the employment of more resources than had been required for the conventional campaign in Iraq. As shown in Figure 3, the notional demand for intelligence support is relatively high over a prolonged period in a COIN environment and likely tends downward only after a transition to civil authority.[144] As we have seen in Iraq and Afghanistan however, demand for support has outstripped capacity and

[144] Ibid.

resulted in a gap between intelligence demand and capability. Second, policies implemented by the DOD and Secretary of Defense to limit deployment lengths, unit mobilizations and dwell time further reduced the Total Force's capability to provide intelligence support.[145] Thus, the longer the dwell time at home, the fewer assets

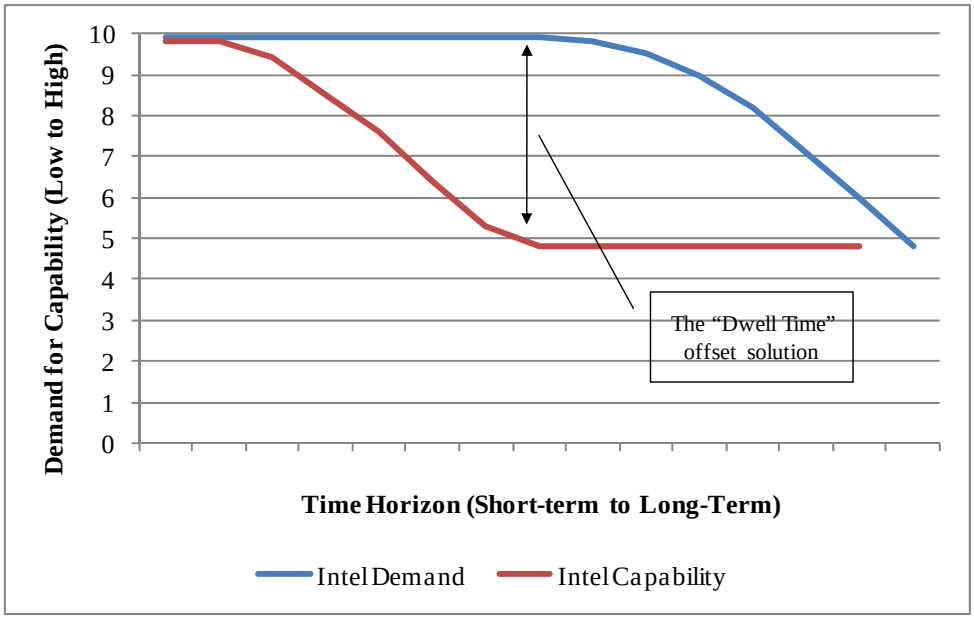

Figure 3: COIN Demand/Capability Gap

available to go forward, the greater the demand/capability gap. These policies, in conjunction with Guard and Reserve mobilization rules, served to create a gap in sustainability between the AC and RC as illustrated in Figure 4. For example, with a mobilization ratio of one year mobilized to five years demobilized for Guard and Reserve versus one year deployed to two years at home a significant gap will develop as a conflict lengthens. The obvious result was a decline in the ability of the Total Force to meet demand requirements in Iraq and Afghanistan due to the inability to regenerate Guard

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[145] For additional information on guidelines concerning utilization of the Total Force see U.S. Secretary of Defense Robert M. Gates "Utilization of the Total Force," memorandum for Secretaries of the Military Departments, Washington: D.C., January 19, 2007.

and Reserve intelligence support at the same relative rate over the long term and drive the 12 to 24 month operational limitations.[146] Absent wishing away the continued need for HD/LD skills sets, what options do policy makers and force planners have to correct the force structure imbalance?

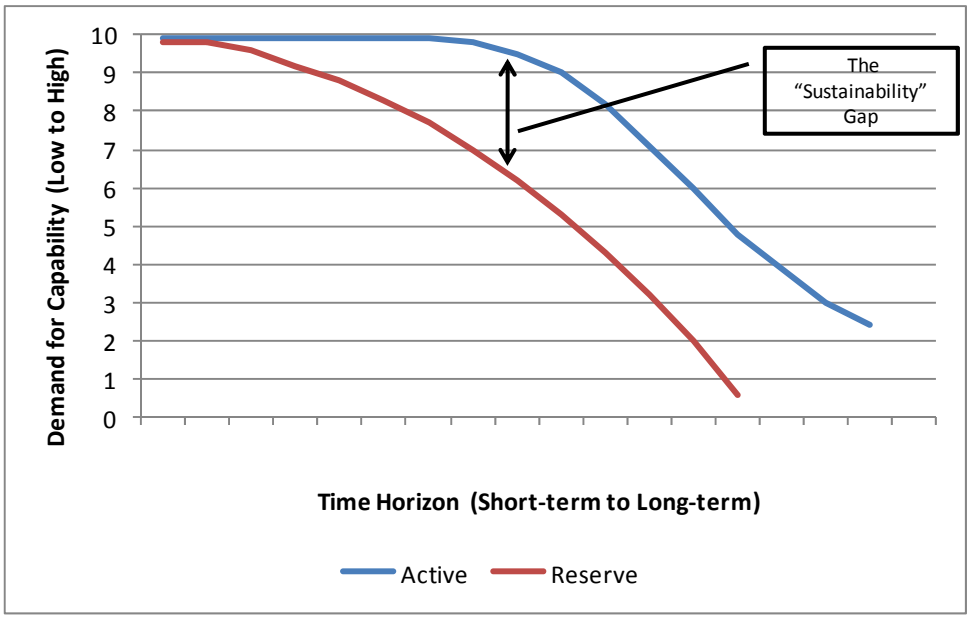

Figure 4: COIN Total Force Sustainability Gap

The Way Ahead – Start with Training

Broadly, under Title 10 United States Code (USC), each of the Services has the statutory responsibility to organize, train, and equip its forces to carry out its roles, missions and functions as a component of national military capability.[147] This requirement is further refined under Title 10 USC, Section 164 wherein the combatant

[146] Although these conceptual examples were constructed using intelligence as a representative HD/LD skill set, any community could have been used to illustrate the ideas.
[147] *Secretary of the Air Force, U.S. Code*, Title 10, secs. 8013 (2007).

commander is granted command authority (COCOM).[148] Under COCOM, the CCDR has the authority to perform those functions of command over assigned forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction. This includes over all aspects of military operations, joint training (or, in the case of United States Special Operations Command, (USSOCOM), training of assigned forces), and logistics necessary to accomplish the missions assigned to the command. Normally, this authority is exercised through subordinate Joint Force Commands (JFCs) and Service and/or functional component commanders.

As with each of the Services, the Navy is responsible to provide trained and equipped personnel to CCDRs to meet mission requirements. Under COCOM authority, USCENTCOM has outlined the minimum individual training requirements for personnel that are assigned or attached to the USCENTCOM theater.[149] These requirements are commonly referred to as Theater Specific Individual Readiness Training (TSIRT). [150] Given the ground-centric nature of Operations Enduring and Operation Iraqi Freedom

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[148] COCOM is the "authority of a combatant commander to perform those functions of command over assigned forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction over all aspects of military operations, joint training, and logistics necessary to accomplish the missions assigned to the command. Combatant command (command authority) should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Combatant command (command authority) provides full authority to organize and employ commands and forces as the combatant commander considers necessary to accomplish assigned missions. Operational control is inherent in combatant command (command authority)." U.S. Department of Defense, *Department of Defense Dictionary of Military and Associated Terns,* [as amended October 17, 2008], Washington, D.C., Joint Publication 1-02, October 17, 2008, 98.

[149] COMFLTFORCOM Norfolk VA//N4/N7//. "Combat Skills Training Requirements for IA." Norfolk, VA: GENADMIN Message dtd 26 OCT 05. (General Administrative Message date time group 261332Z OCT 05 concerning Combat Skills Training Requirements for Individual Augmentees.)

[150] Theater Specific Individual Readiness Training (TSIRT) requirements were originally mandated by USCENTCOM and described in OPORD 05-01 of 10 August 2005. As of March 2009, no other Combatant Command has TSIRT requirements other than USCENTCOM.

USCENTCOM promulgated TSIRT requirements via the Coalition Land Forces Component Commander (CFLCC). Initial skills training for Combat Support (CS) and Combat Service Support (CSS) personnel included instruction or certification in marksmanship, first aid, chemical and biological agent protection, tactics, improvised explosive devices, rules of engagement and introductory language training.[151]

As the Joint Force Provider, JFCOM is responsible for providing trained and capable forces based in the U.S. to USCENTCOM and other supported CCDRs. Likewise, the Navy component command assigned to JFCOM, Fleet Forces Command (FLTFORCOM) is responsible for determining training requirements and providing Navy Individual Augmentee (IA) support for USCENTCOM missions via JFCOM.[152]

Based on FLTFORCOM requirements, Naval Personnel Development Command (NPDC) established the NIACT course at the McCrady Training Center, Fort Jackson, South Carolina in January of 2006.[153] In collaboration with the Navy, the Army developed the NIACT Training Support Package (TSP). The TSP was designed to be task based, performance oriented, horizontally and vertically aligned, and as realistic as possible to achieve combat-level standards using specific Army Mission Essential Tasks (METs). This training is delivered through a combination of individual and collective training to meet CFLCC TSIRT and Navy requirements. NIACT content originally delivered at Fort Jackson included the following: basic rifle marksmanship, first aid,

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[151] Mr. Robert Moser, United States Fleet Forces Command N742, interview by author, Norfolk, VA, October 29, 2009

[152] COMFLTFORCOM Norfolk VA//N4/N7//. "Combat Skills Training Requirements for IA." Norfolk, VA: GENADMIN Message dtd 26 OCT 05. (General Administrative Message date time group 261332Z OCT 05 concerning Combat Skills Training Requirements for Individual Augmentees.)

[153] COMFLTFORCOM Norfolk VA//N4/N7//. "Navy Combat Skills Training." Norfolk, VA: GENADMIN Message dtd 09 MAR 05. (General Administrative Message date time group 091516Z SMAR 05 concerning Navy Combat Skills Training.)

general military training, nuclear, biological and chemical protection, land navigation, small arms training, basic combat techniques and communications.[154]

USCENTCOM has made significant changes to TSIRT requirements since the inception of the 13 day NIACT course. As requested by FLTFORCOM, NPDC reviewed essential IA training requirements and recommended additional basic combat skills training be incorporated into the training.[155] NPDC advised that a 26 day training track for sailors was required to provide them with minimum combat skills necessary to serve as IAs in the USCENTCOM AOR.[156] As a result, FLTFORCOM determined that essential IA training required approximately 12 – 14 days of supplementary basic combat skills training in addition to the seven day TSIRT course being run by the Army. In 2008, NPDC revised the NIACT to include additional TSIRT requirements introduced by USCENTCOM,[157] and extended it to three weeks to deliver the needed content. The notional schedule details a 21 day training cycle which finishes on a Saturday; however, course completion normally occurs on Wednesday and allows for transshipment of students on Thursday and Friday, resulting in an actual 18 or 19 day cycle.

Upon completion of NIACT, Navy Individual Augmentees assigned missions in Afghanistan, Iraq and Kuwait are transported into the USCENTCOM AOR via Kuwait.

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[154] Mr. Robert Moser, United States Fleet Forces Command N742, interview by author, Norfolk, VA, October 29, 2009

[155] COMFLTFORCOM Norfolk VA//N70//. "Minimum Combat Skills Training Requirements for IA." Norfolk, VA: GENADMIN Message dtd 23 SEP 05. (General Administrative Message date time group 231726Z SEP 05 concerning Minimum Combat Skills Training Requirements for Individual Augmentees.)

[156] NAVPERSDEVCOM Norfolk VA//N00/N7//. "Minimum Combat Skills Training Requirements for Individual Augmentees (IA)." Norfolk, VA: GENADMIN Message dtd 29 SEP 05. (General Administrative Message date time group 291924Z SEP 05 concerning Minimum Combat Skills Training Requirements for Individual Augmentees.)

[157] FORSCOM AFOP-TRO/0700039/AUG//. "Training Guidance for Follow-on Forces Deploying ISO Operation Iraqi Freedom, Change 8." GENADMIN Message dtd 18 JAN 07. (General Administrative Message date time group 182151Z JAN 07 concerning Change to Training Guidance for Forces Deploying for OIF.)

Upon arrival in Kuwait, Navy personnel will be provided three days of additional combat skills, Counter Improvised Explosive Devices, and Tactical Movement training at the Udari Range. The CQM/CIED/TM training allows for environment and time zone acclimatization, more exposure to Close-Quarters Marksmanship, Crew-Served Weapons (CSW), CIED, tactical movement, and a continual focus on new enemy tactics, techniques, and procedures (TTPs) in a desert environment. This training is taught by an Army contractor, Military Professional Resources, Inc. (MPRI) and expected dwell time is seven days. MPRI updates the training on a continual basis to ensure that CIED, TTPs and Rules of Engagement (ROE) are current. Student feedback is also incorporated, and the course is completely reviewed by MPRI on a quarterly basis. Before the Sailor even arrived to begin work he has already spent one week at a Naval Mobilization Processing Center, three weeks at NIACT, seven days at the Udari Range and one week traveling. There are better ways to address the training challenges.

Perhaps the most beneficial way to address the demand/capability and sustainability gaps issues caused by the lack of personnel with HD/LD skill sets is through training. At present, there is no uniform program for the training of IAs deploying into the USCENTCOM Area of Operations. Instead, each Service has constructed its own program of instruction to meet the standard TSIRT requirements promulgated by USCENTCOM. In the case of NIACT, the Navy contracted with the Army to develop a Training Support Package (TSP) that included additional skill training over and above the minimum TSIRT requirements. The Air Force developed a number of courses including the Air Force Basic Combat Convoy Course and the Common Battlefield Airman Training-Bridge using internal Air Force guidelines. The Army's

program is 7 days long and taught at the CONUS Replacement Center (CRC). The Marines have no dedicated program of their own, and process through the CRC with the Army. The only commonality is that there is none. Moreover, there is no standard DOD guidance concerning the training and employment of Individual Augmentees - leaving the Services to fill the vacuum. Finally, because the training is GWOT related, the Services are reimbursed for the training expenses incurred and are not obligated to implement long-term training solutions that are incorporated into their basic military training.

The lack of standardized training is an opportunity for the Chairman of the Joint Chiefs to establish the requirements, policies, procedures and TSP for the joint military training of Individual Augmentees to fulfill TSIRT requirements across the Services. The Chairman's adoption of this initiative would provide for the most economical and efficient use of scare training dollars. Moreover, the establishment of a standard IA military skills training program would provide a standard set of baseline skills, and allow greater interoperability among forces. Going forward, the Chairman should establish a common core basic military skills training requirement for all Service personnel. This course would utilize a standard plan of instruction, set common minimum acceptable standards of performance and be implemented in each of the Service basic military training courses. Once implemented, the Chairman should develop the requirements for ongoing refresher training across the Services to maintain proficiency in basic military skills. Army Warrior Skills, Marine Corps or a hybrid approach could be used. Again, a standard plan of instruction should be developed along with common minimum acceptable standards of performance. Absent any mission specific training,

implementation of common core and refresher training could: 1) eliminate the need for pre-deployment military training such as NIACT or CBAT, and 2) reduce the predeployment training to what is currently being offered at CRC. The general benefits would include the increase in efficiency by saving time, training dollars and eliminating pre-deployment training. Because the training would be standard, all Service personnel would be more interoperable. This would also allow for a uniform flow of personnel into theater. Currently, Navy personnel are constrained to arriving in theater once every four to five weeks, depending upon the NIACT training schedule. Flow through the CRC would allow for a uniform arrival of personnel every week – eliminating Relief-in-Place and Transfer-of-Authority (RIP/TOA) issues due to cross service assignments over time to a particular JMD billet. Finally, implementation would build capability to meet current and future needs now using GWOT funding. No money would be required from the Services to develop the program and the Chairman builds joint warfighters from the ground up.

Similar to common core military training, the Chairman should mandate and establish common occupational training for all High-Demand/Low Density, Combat Service and Combat Service Support career fields. Not all MOSs and career fields are created equal. As a result, when the JMD is developed by an Army G-1, the job requirement may require an exact skill found only in the Army. The waste and inefficiency associated with sending personnel over with similar but disparate skills and training can be avoided by implementing common occupational training. The CCDR benefits because personnel report with a standard baseline of skills, they are interoperable, and immediately employable functionally as an IA. Further, the

combination of efficiency and effectiveness benefits derived would provide the ability for services to buy selected HD/LD force structure in the AC/RC and/or redistribute amongst the components. Common occupational HD/LD training would also serve as a platform for improved training and doctrine development, and lend impetus to system standardization across the Services. It could also lead to decrease in operational staff size, reduce the number of JMD positions, and lessen the impact of persistent shortfalls. Finally, it might serve as a starting point for the possible establishment of common service forces.

Implementing common core military training and common occupational training for all High-Demand/Low Density, Combat Service and Combat Service Support career fields are just two ways the DOD can address the current force structure imbalance. However, they are longer-term approaches to a current and pressing problem. Another alternative approach in solving the force structure imbalance is to restructure the Total Force.

The Way Ahead – Restructure the Total Force

In addition to implementing sweeping changes in training, the DOD should consider restructuring the Total Force through a series of initiatives designed to offer the Services flexibility in performing their Title 10 responsibilities and meeting the intent of Goldwater-Nichols. First, to reduce the sustainability gap and close the demand/capability gap, the Services should conduct a manpower and force structure study to determine force structure requirements and place additional High Demand/Low Density CS and CSS capabilities in the Active Component. Second, the Services should contract with Combat Support Agencies, where possible, to provide Emergency Essential

personnel to fill CS and CSS shortfalls. For example, the Services could hire the Defense Logistics Agency (DLA) to provide logisticians and contracting officers. In addition, the Defense Contract Management Agency (DCMA) could be hired to provide auditors and contracting officers. Third, the Service could enter into agreements similar to the CRAF and VISA programs used by USTRANSCOM to obtain additional CS and CSS surge capacity. Alternatively, a contract similar to LOGCAP could be designed and implemented to provide CS and CSS support. Fourth, the nature of Guard and Reserve service could be redefined to include a Ready Surge Reserve and Ready Strategic Reserve. The Ready Surge Reserve would be designated as the operational component of the Guard and Reserve and be expected to deploy regularly and often in support of military operations. The Ready Strategic Reserve would maintain a lower operational tempo and deploy half as frequently as the Ready Surge Reserve. The DOD should use the next Quadrennial Defense Review to explore restructuring the Total Force and investigate all of these options.

As policy makers and planners look forward to the future, it is possible to discern some important trends. First, persistent engagement and shaping activities will become a more important part of U.S. Theater Security Cooperation (TSC) programs. Second, the need for HD/LD skill sets will continue to grow as PRTs, MTTs, ETTs and other non-standard missions will become part of our persistent engagement strategy going forward. Third, U.S. Government spending will necessarily shift away from defense spending due to current economic conditions and the required growth in entitlement and mandatory spending program. Fourth, as resource constraints increase, the Services will likely have

solutions forced upon them. It is better to engage now and shape the outcome than be burdened by it – decisive action is required now.

Adoption of the recommendations offered will better contribute to the accomplishment of United States national security objectives by providing a more flexible, and tailored military capability that enhances the other elements of national power. We cannot afford to do otherwise.

VIII. Conclusion

Prior to 2001, the number of Individual Augmentees required by Combatant Commanders to fill unfunded temporary manpower requirements in support of approved operations had been less than 600 per year. Since the commencement of OEF and OIF, the demand for IAs has grown exponentially. At present, the number of personnel required to fill IA positions identified on a JMD in order to augment staff positions now exceeds 6,000 per year.

The responsibility to provide, train and equip IAs is a Service responsibility. However, the demand pattern for IAs due to the Global War on Terror (GWOT) has strained the Services' capabilities to provide the required number of ready, relevant and capable personnel in a timely manner. The demand for personnel with HD/LD skill sets that are either non-existent, or in high demand and short supply, is a partial reason for this strain. In addition, the assignment, training and management of personnel to support IA positions is not standard across the Services. This has resulted in a discontinuity in the availability and deployment of personnel with like skills to meet CCDR and Joint Force Commander (JFC) requirements. Further, distinct and disparate Service-centric policies and procedures have reduced Total Force generation capability and lengthened the reset period for all Services.

In an era of persistent conflict, rapid change, increasing competition and ever-important resource constraints, the United States can ill afford to bring to bear a national instrument of power that is not properly tailored to meet mission requirements. Increased CCDR demand for IAs in support of the GWOT is a reflection of a force structure imbalance in the United States Armed Forces.

The force structure imbalance that exists today resulted from a relatively few number of short-run economic, political and policy decisions that had long-term unforeseen, and unintended cumulative consequences on force planning and force structure in the United States. Passage of the Employment Act of 1946 and tension between foreign and domestic policy concerns over the war in Vietnam and Great Society imposed political and economic resource constraints that resulted in the All-Volunteer Force. The AVF was a costly change in force structure that necessitated a significant reduction in active duty end strength to remain cost neutral relative to prior DOD budgets and outlays. In order to address the potential risks to national security associated with a smaller force the Total Force concept was introduced. The Total Force construct provided a mechanism to lay off a larger portion of risk on the Guard and Reserve components in a cost advantageous way over time. The fall of the Berlin Wall, collapse of Communism, and advent of globalism in the 1990s signaled a dramatic shift in U.S. foreign policy and domestic priorities. America took a peace dividend and dramatically downsized the U.S. Armed Forces. In the process, the Armed Forces lost the organizational capacity and infrastructure needed to perform continuous large-scale combat operations for longer than 12 to 24 months without causing significant institutional strain. The transfer of additional operational responsibilities to the Guard and Reserve and creation of the Individual Augmentation program could not replace the missing CS, CSS support personnel, organizations and infrastructure required to continuously regenerate combat capability for use at the operational level of war. The allocation of resources in support of the national defense will always be limited. Therefore, it is incumbent on policy makers and planners to understand and appreciate

the effect that the Law of Unintended Consequences and cumulative cost have in limiting freedom of action over time at the strategic and operational level.

In order to better fulfill CCDR requirements and utilize Service assets in a more efficient, effective and economical manner, the Department of Defense should adopt the following recommendations:

1. Establish common joint military skills training for all Services.

2. Mandate and establish common occupational training for all High-Demand/Low Density, Combat Service and Combat Service Support career fields.

3. Restructure the Total Force to place more High Demand/Low Density CS and CSS capabilities in the Active Component.

4. Contract with Combat Service Agencies (CSAs) to provide Emergency Essential personnel to fill CS and CSS shortfalls.

5. Contract with the private sector to provide CS and CSS support using the CRAF and VISA programs as a model.

6. Restructure the nature of Guard and Reserve service and contract for a Ready Surge Reserve, and Ready Strategic Reserve.

Adoption of the recommendations offered will better contribute to the accomplishment of United States national security objectives by providing a more flexible, and tailored military capability that enhances the other elements of national power. The United States cannot afford to do otherwise.

Appendix A: Strategy and Force Planning Framework[158]

The Strategy and Force Planning Framework shown below highlights an approach towards strategy and force planning that can be used to answer six fundamental questions: 1) What do we want to do? 2) How do we plan to do it? 3) What are we up against? 4) What is available to do it? 5) What are the mismatches? 5) Why do we want to do this?

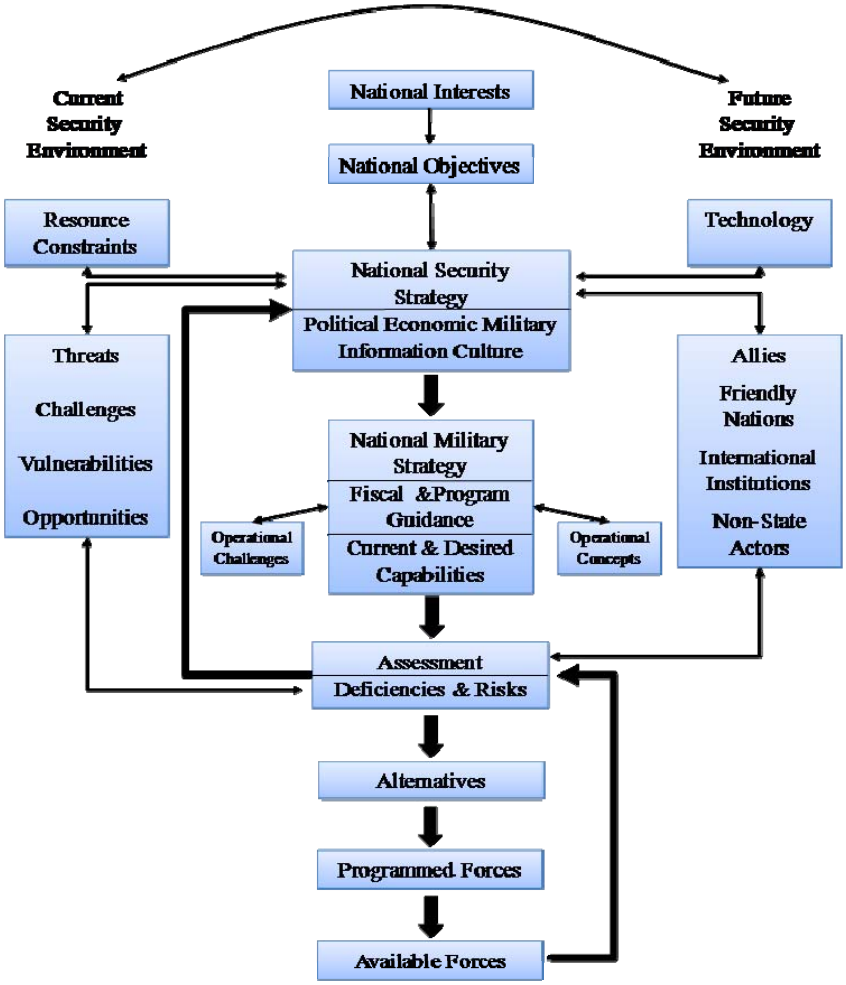

Figure 5: Strategy and Force Planning Framework

[158] Richmond M. Lloyd, ed., Strategy and Force Planning, 4th ed. (Newport, RI: Naval War College Press, 2004), 3.

Appendix B: Department of Defense Manpower Statistics[159]

Department of Defense Personnel: 1960 to 2007

		Army					Navy [2]					Marine Corps					Air Force				
			Male		Female			Male		Female			Male		Female			Male		Female	
Year	Total [1,2]	Total [1]	Officers	Enlisted	Officers	Enlisted	Total [1]	Officers	Enlisted	Officers	Enlisted	Total [1]	Officers	Enlisted	Officers	Enlisted	Total [1]	Officers	Enlisted	Officers	Enlisted
1960	2,475	873	97	762	4.3	8.3	617	67	540	2.7	5.4	171	16	153	0.1	1.5	815	126	677	3.7	5.7
1965	2,654	969	108	846	3.8	8.5	670	75	583	2.6	5.3	190	17	172	0.1	1.4	825	128	685	4.1	4.7
1970	3,065	1323	162	1142	5.2	11.5	691	78	600	2.9	5.8	260	25	233	0.3	2.1	791	125	648	4.7	9
1975	2,128	784	98	640	4.6	37.7	535	62	449	3.7	17.5	196	19	174	0.3	2.8	613	100	478	5	25.2
1979	2,027	759	90	602	6.9	55.2	523	58	432	4.4	25	185	18	161	0.5	5.5	560	89	413	7.3	46.4
1980	2,051	777	91	612	7.6	61.7	527	58	430	4.9	30.1	189	18	164	0.5	6.2	558	90	404	8.5	51.9
1981	2,083	781	94	610	8.3	65.3	540	60	435	5.3	34.6	191	17	165	0.5	7.1	570	90	413	9.1	54.4
1982	2,109	780	94	609	9	64.1	553	61	444	5.7	37.3	192	18	165	0.6	7.9	583	92	421	9.9	54.5
1983	2,123	780	97	602	9.5	66.5	558	62	444	6.3	40.8	194	19	166	0.6	8.3	592	94	428	10.6	55.3
1984	2,138	780	98	601	10.2	67.1	565	62	448	6.6	42.6	196	19	167	0.6	8.6	597	95	430	11.2	55.9
1985	2,151	781	99	599	10.8	68.4	571	64	449	6.9	45.7	198	19	169	0.7	9	602	96	431	11.9	58.1
1986	2,169	781	99	597	11.3	69.7	581	65	457	7.3	47.2	200	19	170	0.6	9.2	608	97	434	12.4	61.2
1987	2,174	781	96	596	11.6	71.6	587	65	462	7.2	47.7	200	19	170	0.6	9.1	607	94	432	12.6	63.2
1988	2,138	772	95	588	11.8	72	593	65	466	7.3	49.7	197	19	168	0.7	9	576	92	405	12.9	61.5
1989	2,130	770	95	584	12.2	74.3	593	65	464	7.5	52.1	197	19	168	0.7	9	571	91	399	13.4	63.7
1990	2,044	732	92	553	12.4	71.2	579	64	451	7.8	52.1	197	19	168	0.7	8.7	535	87	370	13.3	60.8
1991	1,986	711	91	535	12.5	67.8	570	63	444	8	51.4	194	19	166	0.7	8.3	510	84	350	13.3	59.1
1992	1,807	610	83	449	11.7	61.7	542	61	417	8.3	51	185	18	157	0.6	7.9	470	77	320	12.7	56.1
1993	1,705	572	77	420	11.1	60.2	510	58	390	8.3	49.3	178	17	153	0.6	7.2	444	72	302	12.3	54.5
1994	1,610	541	74	394	10.9	59	469	54	355	8	47.9	174	17	149	0.6	7	426	69	287	12.3	54
1995	1,518	509	72	365	10.8	57.3	435	51	324	7.9	47.9	175	17	150	0.7	7.4	400	66	266	12.1	52.1
1996	1,472	491	70	347	10.6	59	417	50	308	7.8	46.9	175	17	149	0.8	7.8	389	64	256	12	52.8
1997	1,439	492	69	346	10.4	62.4	396	48	290	7.8	44.8	174	17	148	0.8	8.5	377	62	246	12	53.8
1998	1,407	484	68	340	10.4	61.4	382	47	280	7.8	42.9	173	17	146	0.9	8.9	368	60	237	12	54.2
1999	1,386	479	67	337	10.5	61.5	373	46	271	7.7	43.9	173	17	145	0.9	9.3	361	58	232	11.8	54.6
2000	1,384	482	66	339	10.8	62.9	373	46	272	7.8	43.8	173	17	146	0.9	9.5	356	57	227	11.8	55
2001	1,385	481	65	337	11	63.4	378	46	273	8	46.6	173	17	145	1	9.6	354	57	224	12	55.6
2002	1,414	487	66	341	11.5	63.2	385	47	279	8.2	47.3	174	17	146	1	9.5	368	59	233	12.9	58.6
2003	1,434	499	68	352	12	63.5	382	47	276	8.2	47.3	178	18	149	1.1	9.6	375	61	237	13.5	60
2004	1,427	500	69	358	12.3	61	373	46	273	8.1	46.1	178	18	149	1.1	9.7	377	61	242	13.6	60.2
2005	1,389	493	69	353	12.4	57.9	363	45	266	7.8	44.5	180	18	151	1	9.8	354	60	225	13.4	55.6
2006	1,385	505	69	365	12.5	58.5	350	44	255	7.6	43.2	180	18	151	1.1	10	349	58	223	12.8	55.8
2007	1,380	522	71	379	13	58.8	338	44	244	7.6	42.2	186	18	156	1.1	10.5	333	54	214	11.8	53.4

Notes: Figures are in thousands (2,475 represents 2,475,000). As of end of fiscal year; see text, Section 8.
Includes National Guard, Reserve, and retired regular personnel on extended or continuous active duty Excludes Coast Guard Other officer candidates are included under enlisted personnel.

[1] Includes cadets, midshipmen, and others not shown seperately.

[2] Beginning 1980, excludes Navy Reserve personnel on active duty for Training and Administration of Reserves (TARS).

Source: U.S. Department of Defense, Selected Manpower Statistics, annual. See also <http//siadapp.dmdc.osd.mil.html>

Table 1: Department of Defense Personnel: 1960 to 2007

[159] U. S. Department of Defense, "Selected Manpower Statistics, Annual," Defense Management Data Center, http://siadapp.dmdc.osd.mil (accessed February 8, 2009).

Appendix C: Budget of the United States Government Data 1940 - 2013[160]

OUTLAYS BY SUPERFUNCTION AND FUNCTION: 1940–2013 - Part 1 of 4

Superfunction and Function	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
In millions of dollars																			
National defense	**1,660**	**6,435**	**25,658**	**66,699**	**79,143**	**82,965**	**42,681**	**12,808**	**9,105**	**13,150**	**13,724**	**23,566**	**46,089**	**52,802**	**49,266**	**42,729**	**42,523**	**45,430**	**46,815**
Human resources	**4,139**	**4,158**	**3,599**	**2,659**	**1,928**	**1,859**	**5,493**	**9,909**	**9,868**	**10,805**	**14,221**	**11,001**	**11,745**	**11,836**	**13,076**	**14,908**	**16,052**	**18,161**	**22,288**
Education, training, employment, and social services	1,972	1,592	1,062	375	160	134	85	102	191	178	241	235	339	441	370	445	591	590	643
Health	55	60	71	92	174	211	201	177	162	197	268	323	347	336	307	291	359	479	541
Medicare	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Income security	1,514	1,855	1,828	1,739	1,503	1,137	2,384	2,820	2,499	3,174	4,097	3,352	3,655	3,823	4,434	5,071	4,734	5,427	7,535
Social security	28	91	137	177	217	267	358	466	558	657	781	1,565	2,063	2,717	3,352	4,427	5,478	6,661	8,219
(On-budget)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(Off-budget)	28	91	137	177	217	267	358	466	558	657	781	1,565	2,063	2,717	3,352	4,427	5,478	6,661	8,219
Veterans benefits and services	570	560	501	276	-126	110	2,465	6,344	6,457	6,599	8,834	5,526	5,341	4,519	4,613	4,675	4,891	5,005	5,350
Physical resources	**2,312**	**1,782**	**3,892**	**6,433**	**5,471**	**1,747**	**836**	**1,227**	**2,243**	**3,104**	**3,667**	**3,924**	**4,182**	**4,005**	**2,584**	**2,732**	**3,092**	**4,559**	**5,188**
Energy	88	91	156	116	65	25	41	18	292	341	327	383	474	425	432	325	174	240	348
Natural resources and environment	997	817	819	726	642	455	482	700	780	1,080	1,308	1,310	1,233	1,289	1,007	940	870	1,098	1,407
Commerce and housing credit	550	398	1,521	2,151	624	-2,630	-1,857	-923	306	800	1,035	1,228	1,278	910	-184	92	506	1,424	930
(On-budget)	550	398	1,521	2,151	624	-2,630	-1,857	-923	306	800	1,035	1,228	1,278	910	-184	92	506	1,424	930
(Off-budget)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Transportation	392	353	1,283	3,220	3,901	3,654	1,970	1,130	787	916	967	956	1,124	1,264	1,229	1,246	1,450	1,662	2,334
Community and regional development	285	123	113	219	238	243	200	302	78	-33	30	47	73	117	100	129	92	135	169
Net interest	**899**	**943**	**1,052**	**1,529**	**2,219**	**3,112**	**4,111**	**4,204**	**4,341**	**4,523**	**4,812**	**4,665**	**4,701**	**5,156**	**4,811**	**4,850**	**5,079**	**5,354**	**5,604**
(On-budget)	941	999	1,123	1,616	2,322	3,236	4,259	4,367	4,532	4,753	5,069	4,952	5,035	5,543	5,250	5,288	5,567	5,910	6,175
(Off-budget)	-42	-56	-71	-87	-103	-124	-148	-163	-191	-230	-257	-287	-334	-387	-439	-438	-487	-557	-571
Other functions	**775**	**882**	**1,830**	**2,457**	**3,864**	**4,418**	**3,580**	**7,900**	**5,851**	**9,032**	**7,955**	**4,690**	**4,346**	**5,873**	**4,515**	**6,718**	**7,482**	**7,220**	**6,896**
International affairs	51	145	968	1,286	1,449	1,913	1,935	5,791	4,566	6,052	4,673	3,647	2,691	2,119	1,596	2,223	2,414	3,147	3,364
General science, space and technology	.....	.....	4	1	48	111	34	5	1	48	55	51	49	49	46	74	79	122	141
Agriculture	369	339	344	343	1,275	1,635	610	814	69	1,924	2,049	-323	176	2,253	1,817	3,514	3,486	2,288	2,411
Administration of justice	81	92	117	154	192	178	176	176	170	184	193	218	267	243	257	256	302	303	325
General government	274	306	397	673	900	581	825	1,114	1,045	824	986	1,097	1,163	1,209	799	651	1,201	1,360	655
Allowances	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Undistributed offsetting receipts	**-317**	**-547**	**-894**	**-1,221**	**-1,320**	**-1,389**	**-1,468**	**-1,552**	**-1,643**	**-1,779**	**-1,817**	**-2,332**	**-3,377**	**-3,571**	**-3,397**	**-3,493**	**-3,589**	**-4,146**	**-4,385**
(On-budget)	-317	-547	-894	-1,221	-1,320	-1,389	-1,468	-1,552	-1,643	-1,779	-1,817	-2,332	-3,377	-3,571	-3,396	-3,487	-3,571	-4,058	-4,240
(Off-budget)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	-1	-6	-18	-88	-145
Total, Federal outlays	**9,468**	**13,653**	**35,137**	**78,555**	**91,304**	**92,712**	**55,232**	**34,496**	**29,764**	**38,835**	**42,562**	**45,514**	**67,686**	**76,101**	**70,855**	**68,444**	**70,640**	**76,578**	**82,405**
(On-budget)	9,482	13,618	35,071	78,466	91,190	92,569	55,022	34,193	29,396	38,408	42,038	44,237	65,956	73,771	67,943	64,461	65,668	70,562	74,902
(Off-budget)	-14	35	66	89	114	143	210	303	368	427	524	1,277	1,730	2,330	2,912	3,983	4,972	6,016	7,503
As percentages of outlays																			
National defense	17.5	47.1	73.0	84.9	86.7	89.5	77.3	37.1	30.6	33.9	32.2	51.8	68.1	69.4	69.5	62.4	60.2	59.3	56.8
Human resources	43.7	30.5	10.2	3.4	2.1	2.0	9.9	28.7	33.2	27.8	33.4	24.2	17.4	15.6	18.5	21.8	22.7	23.7	27.0
Physical resources	24.4	13.1	11.1	8.2	6.0	1.9	1.5	3.6	7.5	8.0	8.6	8.6	6.2	5.3	3.6	4.0	4.4	6.0	6.3
Net interest	9.5	6.9	3.0	1.9	2.4	3.4	7.4	12.2	14.6	11.6	11.3	10.2	6.9	6.8	6.8	7.1	7.2	7.0	6.8
Other functions	8.2	6.5	5.2	3.1	4.2	4.8	6.5	22.9	19.7	23.3	18.7	10.3	6.4	7.7	6.4	9.8	10.6	9.4	8.4
Undistributed offsetting receipts	-3.4	-4.0	-2.5	-1.6	-1.4	-1.5	-2.7	-4.5	-5.5	-4.6	-4.3	-5.1	-5.0	-4.7	-4.8	-5.1	-5.1	-5.4	-5.3
Total, Federal outlays	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
(On-budget)	100.2	99.7	99.8	99.9	99.9	99.8	99.6	99.1	98.8	98.9	98.8	97.2	97.4	96.9	95.9	94.2	93.0	92.1	90.9
(Off-budget)	-0.2	0.3	0.2	0.1	0.1	0.2	0.4	0.9	1.2	1.1	1.2	2.8	2.6	3.1	4.1	5.8	7.0	7.9	9.1
As percentages of GDP																			
National defense	1.7	5.6	17.8	37.0	37.8	37.5	19.2	5.5	3.6	4.9	5.0	7.4	13.2	14.2	13.1	10.8	10.0	10.1	10.2
Human resources	4.3	3.6	2.5	1.5	0.9	0.8	2.5	4.2	3.9	4.0	5.2	3.4	3.4	3.2	3.5	3.8	3.8	4.0	4.8
Physical resources	2.4	1.6	2.7	3.6	2.6	0.8	0.4	0.5	0.9	1.1	1.3	1.2	1.2	1.1	0.7	0.7	0.7	1.0	1.1
Net interest	0.9	0.8	0.7	0.8	1.1	1.4	1.8	1.8	1.7	1.7	1.8	1.5	1.3	1.4	1.3	1.2	1.2	1.2	1.2
Other functions	0.8	0.8	1.3	1.4	1.8	2.0	1.6	3.4	2.3	3.3	2.9	1.5	1.2	1.6	1.2	1.7	1.8	1.6	1.5
Undistributed offsetting receipts	-0.3	-0.5	-0.6	-0.7	-0.6	-0.6	-0.7	-0.7	-0.6	-0.7	-0.7	-0.7	-1.0	-1.0	-0.9	-0.9	-0.8	-0.9	-1.0
Total, Federal outlays	**9.8**	**12.0**	**24.3**	**43.6**	**43.6**	**41.9**	**24.8**	**14.8**	**11.6**	**14.3**	**15.6**	**14.2**	**19.4**	**20.4**	**18.8**	**17.3**	**16.5**	**17.0**	**17.9**
(On-budget)	9.8	11.9	24.3	43.5	43.6	41.8	24.7	14.7	11.5	14.2	15.4	13.8	18.9	19.8	18.0	16.3	15.4	15.7	16.3
(Off-budget)	(–*)	(*)	(*)	(*)	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.5	0.6	0.8	1.0	1.2	1.3	1.6

* 0.05 percent or less.

Table 2: Historical United States Budget Data – 1940 to 1958

[160] Executive Office of the President, "Historical Tables: Budget of the United States Government Fiscal Year 2009," Executive Office of the President. http://www.gpoaccess.gov/usbudget/fy09/pdf/hist.pdf (accessed March 12, 2009).

OUTLAYS BY SUPERFUNCTION AND FUNCTION: 1940–2013 - Part 2 of 4

Superfunction and Function	1959	1960	1961	1962	1963	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	TQ	1977
In millions of dollars																			
National defense	**49,015**	**48,130**	**49,601**	**52,345**	**53,400**	**50,620**	**58,111**	**71,417**	**81,926**	**82,497**	**81,692**	**78,872**	**79,174**	**76,681**	**79,347**	**86,509**	**89,619**	**22,269**	**97,241**
Human resources	**24,892**	**26,184**	**29,838**	**31,630**	**33,522**	**36,576**	**43,257**	**51,272**	**59,375**	**66,410**	**75,349**	**91,901**	**107,211**	**119,522**	**135,783**	**173,245**	**203,594**	**52,065**	**221,895**
Education, training, employment, and social services	789	968	1,063	1,241	1,458	2,140	4,363	6,453	7,634	7,548	8,634	9,849	12,529	12,745	12,457	16,022	18,910	5,169	21,104
Health	685	795	913	1,198	1,451	1,791	2,543	3,351	4,390	5,162	5,907	6,843	8,674	9,356	10,733	12,930	15,734	3,924	17,302
Medicare	.....	.....	.....	.....	.....	.....	64	2,748	4,649	5,695	6,213	6,622	7,479	8,052	9,639	12,875	15,834	4,264	19,345
Income security	8,239	7,378	9,683	9,207	9,311	9,469	9,678	10,261	11,816	13,076	15,655	22,946	27,650	28,276	33,713	50,176	60,799	14,985	61,060
Social security	9,737	11,602	12,474	14,365	15,788	17,460	20,694	21,725	23,854	27,298	30,270	35,872	40,157	49,090	55,867	64,658	73,899	19,763	85,061
(On-budget)	.....	.....	.....	.....	.....	.....	.....	94	94	414	458	465	538	526	494	499	515	.....	717
(Off-budget)	9,737	11,602	12,474	14,365	15,788	17,460	20,694	21,631	23,760	26,885	29,812	35,408	39,620	48,565	55,373	64,159	73,384	19,763	84,344
Veterans benefits and services	5,443	5,441	5,705	5,619	5,514	5,716	5,916	6,735	7,032	7,631	8,669	9,768	10,720	12,003	13,374	16,584	18,419	3,960	18,022
Physical resources	**7,813**	**7,991**	**7,754**	**8,831**	**8,013**	**11,264**	**13,410**	**14,674**	**16,002**	**11,869**	**15,574**	**18,286**	**19,574**	**20,614**	**25,106**	**35,449**	**39,188**	**9,512**	**40,746**
Energy	382	464	510	604	530	699	612	782	1,037	1,010	997	1,035	1,296	1,237	1,303	2,916	4,204	1,129	5,770
Natural resources and environment	1,632	1,559	1,779	2,044	2,251	2,531	2,719	2,869	2,988	2,900	3,065	3,915	4,241	4,775	5,697	7,346	8,184	2,524	10,032
Commerce and housing credit	1,933	1,618	1,203	1,424	62	1,157	3,245	3,979	4,280	-119	2,112	2,366	2,222	931	4,705	9,947	7,619	931	3,093
(On-budget)	1,933	1,618	1,203	1,424	62	1,157	3,245	3,979	4,280	-119	2,112	2,366	1,867	774	3,932	8,835	6,534	1,657	3,266
(Off-budget)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	355	157	773	1,112	1,085	-726	-173
Transportation	3,655	4,126	3,987	4,290	4,596	5,763	5,730	5,936	6,316	6,526	7,008	8,052	8,392	9,066	9,172	10,918	13,739	3,358	14,829
Community and regional development	211	224	275	469	574	1,114	1,105	1,108	1,382	1,552	2,392	2,917	3,423	4,605	4,229	4,322	5,442	1,569	7,021
Net interest	**5,762**	**6,947**	**6,716**	**6,889**	**7,740**	**8,591**	**9,386**	**10,268**	**11,090**	**12,699**	**14,380**	**14,841**	**15,478**	**17,349**	**21,449**	**23,244**	**26,727**	**6,949**	**29,901**
(On-budget)	6,338	7,511	7,307	7,498	8,322	9,239	10,028	11,060	12,069	13,848	15,948	16,783	17,584	19,629	23,969	26,047	29,539	7,042	32,551
(Off-budget)	-576	-563	-591	-609	-582	-648	-642	-792	-979	-1,149	-1,568	-1,942	-2,106	-2,280	-2,520	-2,803	-2,812	-93	-2,650
Other functions	**9,229**	**7,760**	**8,621**	**12,401**	**14,437**	**17,086**	**16,911**	**17,126**	**17,786**	**18,151**	**17,286**	**16,379**	**18,828**	**24,950**	**24,423**	**27,487**	**27,050**	**9,388**	**34,315**
International affairs	3,144	2,988	3,184	5,639	5,308	5,273	5,580	5,566	5,301	4,600	4,330	4,159	4,781	4,149	5,710	7,097	6,433	2,458	6,353
General science, space and technology	294	599	1,042	1,723	3,051	5,823	6,717	6,233	5,524	5,020	4,511	4,182	4,175	4,032	3,980	3,991	4,373	1,162	4,736
Agriculture	4,509	2,623	2,641	3,562	4,384	3,954	2,447	2,990	4,544	5,826	5,166	4,290	5,227	4,821	2,194	2,997	3,109	972	6,734
Administration of justice	356	366	400	429	465	536	564	618	659	766	959	1,307	1,684	2,174	2,505	3,028	3,430	918	3,701
General government	926	1,184	1,354	1,049	1,230	1,499	1,603	1,719	1,757	1,939	2,320	2,442	2,960	9,774	10,032	10,374	9,706	3,878	12,791
Allowances	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Undistributed offsetting receipts	**-4,613**	**-4,820**	**-4,807**	**-5,274**	**-5,797**	**-5,908**	**-6,542**	**-7,294**	**-8,045**	**-7,986**	**-8,632**	**-10,107**	**-9,583**	**-13,409**	**-16,749**	**-13,602**	**-14,386**	**-4,206**	**-14,879**
(On-budget)	-4,449	-4,632	-4,601	-5,053	-5,555	-5,626	-6,205	-6,879	-7,600	-7,454	-7,995	-9,467	-8,926	-12,714	-15,985	-12,686	-13,423	-3,957	-13,902
(Off-budget)	-164	-188	-206	-221	-242	-282	-337	-415	-445	-532	-637	-640	-657	-695	-764	-916	-963	-249	-977
Total, Federal outlays	**92,098**	**92,191**	**97,723**	**106,821**	**111,316**	**118,228**	**134,532**	**157,464**	**178,134**	**183,640**	**195,649**	**210,172**	**230,681**	**245,707**	**269,359**	**332,332**	**371,792**	**95,975**	**409,218**
(On-budget)	83,102	81,341	86,046	93,286	96,352	101,699	114,817	137,040	155,798	158,436	168,042	177,346	193,470	199,961	216,496	270,780	301,098	77,281	328,675
(Off-budget)	8,996	10,850	11,677	13,535	14,964	16,529	19,715	20,424	22,336	25,204	27,607	32,826	37,212	45,746	52,862	61,552	70,695	18,695	80,543
As percentages of outlays																			
National defense	53.2	52.2	50.8	49.0	48.0	42.8	43.2	45.4	46.0	44.9	41.8	37.5	34.3	31.2	29.5	26.0	24.1	23.2	23.8
Human resources	27.0	28.4	30.5	29.6	30.1	30.9	32.2	32.6	33.3	36.2	38.5	43.7	46.5	48.6	50.4	52.1	54.8	54.2	54.2
Physical resources	8.5	8.7	7.9	8.3	7.2	9.5	10.0	9.3	9.0	6.5	8.0	8.7	8.5	8.4	9.3	10.7	10.5	9.9	10.0
Net interest	6.3	7.5	6.9	6.4	7.0	7.3	7.0	6.5	6.2	6.9	7.4	7.1	6.7	7.1	8.0	7.0	7.2	7.2	7.3
Other functions	10.0	8.4	8.8	11.6	13.0	14.5	12.6	10.9	10.0	9.9	8.8	7.8	8.2	10.2	9.1	8.3	7.3	9.8	8.4
Undistributed offsetting receipts	-5.0	-5.2	-4.9	-4.9	-5.2	-5.0	-4.9	-4.6	-4.5	-4.3	-4.4	-4.8	-4.2	-5.5	-6.2	-4.1	-3.9	-4.4	-3.6
Total, Federal outlays	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
(On-budget)	90.2	88.2	88.1	87.3	86.6	86.0	85.3	87.0	87.5	86.3	85.9	84.4	83.9	81.4	80.4	81.5	81.0	80.5	80.3
(Off-budget)	9.8	11.8	11.9	12.7	13.4	14.0	14.7	13.0	12.5	13.7	14.1	15.6	16.1	18.6	19.6	18.5	19.0	19.5	19.7
As percentages of GDP																			
National defense	10.0	9.3	9.3	9.2	8.9	7.4	7.7	8.8	9.5	8.7	8.1	7.3	6.7	5.9	5.5	5.5	5.2	4.9	4.9
Human resources	5.1	5.1	5.6	5.6	5.6	5.3	5.7	6.3	6.9	7.0	7.4	8.5	9.1	9.1	9.4	11.1	11.7	11.4	11.2
Physical resources	1.6	1.5	1.5	1.6	1.3	1.6	1.8	1.8	1.8	1.3	1.5	1.7	1.7	1.6	1.7	2.3	2.3	2.1	2.1
Net interest	1.2	1.3	1.3	1.2	1.3	1.3	1.2	1.3	1.3	1.3	1.4	1.4	1.3	1.3	1.5	1.5	1.5	1.5	1.5
Other functions	1.9	1.5	1.6	2.2	2.4	2.5	2.2	2.1	2.1	1.9	1.7	1.5	1.6	1.9	1.7	1.8	1.6	2.1	1.7
Undistributed offsetting receipts	-0.9	-0.9	-0.9	-0.9	-1.0	-0.9	-0.9	-0.9	-0.9	-0.8	-0.9	-0.9	-0.8	-1.0	-1.2	-0.9	-0.8	-0.9	-0.8
Total, Federal outlays	**18.7**	**17.8**	**18.4**	**18.8**	**18.6**	**17.2**	**17.9**	**19.4**	**20.6**	**19.4**	**19.3**	**19.5**	**19.6**	**18.8**	**18.7**	**21.3**	**21.4**	**21.0**	**20.7**
(On-budget)	16.9	15.7	16.2	16.4	16.1	14.8	15.2	16.9	18.0	16.7	16.6	16.4	16.4	15.3	15.0	17.3	17.3	16.9	16.6
(Off-budget)	1.8	2.1	2.2	2.4	2.5	2.4	2.6	2.5	2.6	2.7	2.7	3.0	3.2	3.5	3.7	3.9	4.1	4.1	4.1

* 0.05 percent or less.

Table 3: Historical United States Budget Data – 1959 to 1977

OUTLAYS BY SUPERFUNCTION AND FUNCTION: 1940–2013 - Part 3 of 4

Superfunction and Function	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
In millions of dollars																			
National defense	**104,495**	**116,342**	**133,995**	**157,513**	**185,309**	**209,903**	**227,413**	**252,748**	**273,375**	**281,999**	**290,361**	**303,559**	**299,331**	**273,292**	**298,350**	**291,086**	**281,642**	**272,066**	**265,753**
Human resources	**242,329**	**267,574**	**313,374**	**362,022**	**388,681**	**426,004**	**432,044**	**471,824**	**481,595**	**502,202**	**533,405**	**568,686**	**619,345**	**689,695**	**772,483**	**827,589**	**869,479**	**923,854**	**958,331**
Education, training, employment, and social services	26,710	30,223	31,843	33,152	26,612	26,197	26,922	28,596	29,779	28,924	30,936	35,333	37,179	41,241	42,751	47,397	43,295	51,046	48,336
Health	18,524	20,494	23,169	26,866	27,445	28,641	30,417	33,542	35,936	39,967	44,487	48,390	57,716	71,183	89,497	99,415	107,122	115,418	119,378
Medicare	22,768	26,495	32,090	39,149	46,567	52,588	57,540	65,822	70,164	75,120	78,878	84,964	98,102	104,489	119,024	130,552	144,747	159,855	174,225
Income security	61,505	66,376	86,557	100,299	108,155	123,031	113,352	128,979	120,633	124,088	130,377	137,426	148,668	172,462	199,562	209,969	217,166	223,799	229,736
Social security	93,861	104,073	118,547	139,584	155,964	170,724	178,223	188,623	198,757	207,353	219,341	232,542	248,623	269,015	287,585	304,585	319,565	335,846	349,671
(On-budget)	741	757	675	670	844	19,993	7,056	5,189	8,072	4,930	4,852	5,069	3,625	2,619	6,166	6,236	5,683	5,476	5,802
(Off-budget)	93,120	103,316	117,872	138,914	155,120	150,731	171,167	183,434	190,684	202,422	214,489	227,473	244,998	266,395	281,418	298,349	313,881	330,370	343,869
Veterans benefits and services	18,961	19,914	21,169	22,973	23,938	24,824	25,588	26,262	26,327	26,750	29,386	30,031	29,058	31,305	34,064	35,671	37,584	37,890	36,985
Physical resources	**52,590**	**54,559**	**65,985**	**70,886**	**61,752**	**57,603**	**57,967**	**56,820**	**58,737**	**55,142**	**68,631**	**81,567**	**126,037**	**135,175**	**75,611**	**46,856**	**70,703**	**59,139**	**64,191**
Energy	7,991	9,179	10,156	15,166	13,527	9,353	7,073	5,608	4,690	4,072	2,296	2,705	3,341	2,436	4,499	4,319	5,218	4,936	2,839
Natural resources and environment	10,983	12,135	13,858	13,568	12,998	12,672	12,593	13,357	13,639	13,363	14,606	16,182	17,080	18,559	20,025	20,239	21,026	21,915	21,524
Commerce and housing credit	6,254	4,686	9,390	8,206	6,256	6,681	6,959	4,337	5,059	6,435	19,164	29,710	67,600	76,271	10,919	-21,853	-4,228	-17,808	-10,478
(On-budget)	6,750	5,577	9,821	8,117	6,809	6,359	6,599	4,195	5,017	5,492	17,451	30,019	65,974	74,953	10,260	-23,294	-5,331	-15,839	-10,298
(Off-budget)	-496	-891	-431	89	-553	322	360	142	42	943	1,712	-310	1,626	1,317	659	1,441	1,103	-1,969	-180
Transportation	15,521	18,079	21,329	23,379	20,625	21,334	23,669	25,838	28,117	26,222	27,272	27,608	29,485	31,099	33,332	35,004	38,066	39,350	39,565
Community and regional development	11,841	10,480	11,252	10,568	8,347	7,564	7,673	7,680	7,233	5,051	5,294	5,362	8,531	6,810	6,836	9,146	10,620	10,746	10,741
Net interest	**35,458**	**42,633**	**52,533**	**68,766**	**85,032**	**89,808**	**111,102**	**129,478**	**136,017**	**138,611**	**151,803**	**168,981**	**184,347**	**194,448**	**199,344**	**198,713**	**202,932**	**232,134**	**241,053**
(On-budget)	37,860	44,857	54,872	71,054	87,102	91,653	114,411	133,595	140,346	143,901	159,219	180,376	200,338	214,670	222,981	225,501	232,135	265,439	277,560
(Off-budget)	-2,403	-2,224	-2,339	-2,288	-2,071	-1,845	-3,310	-4,118	-4,329	-5,290	-7,416	-11,395	-15,991	-20,222	-23,637	-26,788	-29,203	-33,305	-36,507
Other functions	**39,594**	**40,396**	**44,996**	**47,095**	**51,068**	**59,022**	**55,286**	**68,224**	**73,724**	**62,584**	**57,248**	**58,247**	**60,686**	**71,077**	**75,141**	**82,663**	**74,922**	**73,146**	**68,900**
International affairs	7,482	7,459	12,714	13,104	12,300	11,848	15,876	16,176	14,152	11,649	10,471	9,585	13,764	15,851	16,107	17,248	17,083	16,434	13,496
General science, space and technology	4,926	5,234	5,831	6,468	7,199	7,934	8,317	8,626	8,976	9,215	10,840	12,837	14,443	16,110	16,407	17,029	16,226	16,723	16,708
Agriculture	11,301	11,176	8,774	11,241	15,866	22,814	13,526	25,477	31,368	26,513	17,138	16,861	11,806	15,056	15,088	20,246	14,915	9,672	9,036
Administration of justice	3,923	4,286	4,702	4,908	4,842	5,246	5,811	6,426	6,735	7,715	9,397	9,644	10,185	12,487	14,650	15,193	15,516	16,509	17,898
General government	11,961	12,241	12,975	11,373	10,861	11,181	11,756	11,519	12,493	7,492	9,401	9,320	10,488	11,574	12,888	12,947	11,183	13,808	11,762
Allowances	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Undistributed offsetting receipts	**-15,720**	**-17,476**	**-19,942**	**-28,041**	**-26,099**	**-33,976**	**-31,957**	**-32,698**	**-33,007**	**-36,455**	**-36,967**	**-37,212**	**-36,615**	**-39,356**	**-39,280**	**-37,386**	**-37,772**	**-44,455**	**-37,620**
(On-budget)	-14,660	-16,362	-18,738	-26,611	-24,453	-32,198	-29,913	-30,189	-30,150	-33,155	-32,585	-32,354	-31,048	-33,553	-33,179	-30,970	-31,362	-38,023	-31,342
(Off-budget)	-1,060	-1,114	-1,204	-1,430	-1,646	-1,778	-2,044	-2,509	-2,857	-3,300	-4,382	-4,858	-5,567	-5,804	-6,101	-6,416	-6,409	-6,432	-6,278
Total, Federal outlays	**458,746**	**504,028**	**590,941**	**678,241**	**745,743**	**808,364**	**851,853**	**946,396**	**990,441**	**1,004,083**	**1,064,481**	**1,143,829**	**1,253,130**	**1,324,331**	**1,381,649**	**1,409,522**	**1,461,907**	**1,515,884**	**1,560,608**
(On-budget)	369,585	404,941	477,044	542,956	594,892	660,934	685,680	769,447	806,901	809,308	860,077	932,918	1,028,065	1,082,644	1,129,310	1,142,935	1,182,535	1,227,220	1,259,704
(Off-budget)	89,161	99,087	113,898	135,285	150,851	147,430	166,174	176,949	183,540	194,775	204,404	210,911	225,065	241,687	252,339	266,587	279,372	288,664	300,904
As percentages of outlays																			
National defense	22.8	23.1	22.7	23.2	24.8	26.0	26.7	26.7	27.6	28.1	27.3	26.5	23.9	20.6	21.6	20.7	19.3	17.9	17.0
Human resources	52.8	53.1	53.0	53.4	52.1	52.7	50.7	49.9	48.6	50.0	50.1	49.7	49.4	52.1	55.9	58.7	59.5	60.9	61.4
Physical resources	11.5	10.8	11.2	10.5	8.3	7.1	6.8	6.0	5.9	5.5	6.4	7.1	10.1	10.2	5.5	3.3	4.8	3.9	4.1
Net interest	7.7	8.5	8.9	10.1	11.4	11.1	13.0	13.7	13.7	13.8	14.3	14.8	14.7	14.7	14.4	14.1	13.9	15.3	15.4
Other functions	8.6	8.0	7.6	6.9	6.8	7.3	6.5	7.2	7.4	6.2	5.4	5.1	4.8	5.4	5.4	5.9	5.1	4.8	4.4
Undistributed offsetting receipts	-3.4	-3.5	-3.4	-4.1	-3.5	-4.2	-3.8	-3.5	-3.3	-3.6	-3.5	-3.3	-2.9	-3.0	-2.8	-2.7	-2.6	-2.9	-2.4
Total, Federal outlays	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
(On-budget)	80.6	80.3	80.7	80.1	79.8	81.8	80.5	81.3	81.5	80.6	80.8	81.6	82.0	81.8	81.7	81.1	80.9	81.0	80.7
(Off-budget)	19.4	19.7	19.3	19.9	20.2	18.2	19.5	18.7	18.5	19.4	19.2	18.4	18.0	18.2	18.3	18.9	19.1	19.0	19.3
As percentages of GDP																			
National defense	4.7	4.7	4.9	5.2	5.7	6.1	5.9	6.1	6.2	6.1	5.8	5.6	5.2	4.6	4.8	4.4	4.0	3.7	3.5
Human resources	10.9	10.7	11.5	11.9	12.0	12.4	11.3	11.4	10.9	10.8	10.6	10.5	10.8	11.6	12.4	12.6	12.5	12.6	12.5
Physical resources	2.4	2.2	2.4	2.3	1.9	1.7	1.5	1.4	1.3	1.2	1.4	1.5	2.2	2.3	1.2	0.7	1.0	0.8	0.8
Net interest	1.6	1.7	1.9	2.3	2.6	2.6	2.9	3.1	3.1	3.0	3.0	3.1	3.2	3.3	3.2	3.0	2.9	3.2	3.1
Other functions	1.8	1.6	1.7	1.5	1.6	1.7	1.4	1.6	1.7	1.3	1.1	1.1	1.1	1.2	1.2	1.3	1.1	1.0	0.9
Undistributed offsetting receipts	-0.7	-0.7	-0.7	-0.9	-0.8	-1.0	-0.8	-0.8	-0.7	-0.8	-0.7	-0.7	-0.6	-0.7	-0.6	-0.6	-0.5	-0.6	-0.5
Total, Federal outlays	**20.7**	**20.2**	**21.7**	**22.2**	**23.1**	**23.5**	**22.2**	**22.9**	**22.4**	**21.6**	**21.3**	**21.2**	**21.8**	**22.3**	**22.1**	**21.4**	**21.0**	**20.7**	**20.3**
(On-budget)	16.7	16.2	17.5	17.8	18.4	19.2	17.9	18.6	18.3	17.4	17.2	17.3	17.9	18.2	18.1	17.4	17.0	16.8	16.4
(Off-budget)	4.0	4.0	4.2	4.4	4.7	4.3	4.3	4.3	4.2	4.2	4.1	3.9	3.9	4.1	4.0	4.1	4.0	3.9	3.9

* 0.05 percent or less.

Table 4: Historical United States Budget Data – 1978 to 1996

OUTLAYS BY SUPERFUNCTION AND FUNCTION: 1940–2013 - Part 4 of 4

Superfunction and Function	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008 est	2009 est	2010 est	2011 est	2012 est	2013 est
In millions of dollars																	
National defense	**270,505**	**268,207**	**274,785**	**294,394**	**304,759**	**348,482**	**404,778**	**455,847**	**495,326**	**521,840**	**552,568**	**607,263**	**675,084**	**590,357**	**560,748**	**563,670**	**572,142**
Human resources	**1,002,446**	**1,033,542**	**1,057,875**	**1,115,665**	**1,194,598**	**1,317,664**	**1,417,946**	**1,485,870**	**1,586,122**	**1,672,076**	**1,758,490**	**1,864,535**	**1,943,948**	**2,023,583**	**2,129,832**	**2,180,915**	**2,353,688**
Education, training, employment, and social services	48,991	50,532	50,627	53,789	57,173	70,581	82,603	87,990	97,567	118,560	91,676	93,389	88,313	89,370	89,353	89,620	90,003
Health	123,843	131,442	141,074	154,533	172,270	196,544	219,576	240,134	250,614	252,780	266,432	284,499	299,393	314,061	331,004	352,181	375,037
Medicare	190,016	192,822	190,447	197,113	217,384	230,855	249,433	269,360	298,638	329,868	375,407	396,333	413,324	427,608	460,365	454,193	504,958
Income security	235,032	237,750	242,478	253,724	269,774	312,720	334,632	333,059	345,847	352,477	365,975	388,440	401,711	412,164	423,208	420,293	433,440
Social security	365,251	379,215	390,037	409,423	432,958	455,980	474,680	495,548	523,305	548,549	586,153	615,256	649,332	686,689	725,468	768,681	847,380
(On-budget)	6,879	9,146	10,824	13,254	11,701	13,969	13,279	14,348	16,526	16,058	19,307	18,728	22,890	25,329	27,487	30,254	33,625
(Off-budget)	358,372	370,069	379,213	396,169	421,257	442,011	461,401	481,200	506,779	532,491	566,846	596,528	626,442	661,360	697,981	738,427	813,755
Veterans benefits and services	39,313	41,781	43,212	47,083	45,039	50,984	57,022	59,779	70,151	69,842	72,847	86,618	91,875	93,691	100,434	95,947	102,870
Physical resources	**59,879**	**74,692**	**81,918**	**84,954**	**97,584**	**104,337**	**115,614**	**116,274**	**130,177**	**164,800**	**133,872**	**153,784**	**150,078**	**129,692**	**119,701**	**112,463**	**110,166**
Energy	1,475	1,270	911	-761	9	475	-736	-166	429	782	-860	3,005	3,104	2,914	3,055	2,968	2,600
Natural resources and environment	21,227	22,300	23,968	25,031	25,623	29,454	29,703	30,725	28,023	33,055	31,772	35,549	35,546	31,206	32,943	30,990	29,866
Commerce and housing credit	-14,639	1,008	2,642	3,208	5,732	-406	728	5,266	7,567	6,188	488	7,361	4,182	4,612	817	-252	-192
(On-budget)	-14,590	791	1,621	1,179	3,430	245	5,973	9,396	9,358	7,263	-4,605	6,426	3,111	3,654	329	-752	-172
(Off-budget)	-49	217	1,021	2,029	2,302	-651	-5,245	-4,130	-1,791	-1,075	5,093	935	1,071	958	488	500	-20
Transportation	40,767	40,343	42,532	46,853	54,447	61,833	67,069	64,627	67,894	70,244	72,905	80,268	83,901	71,710	67,820	65,957	66,020
Community and regional development	11,049	9,771	11,865	10,623	11,773	12,981	18,850	15,822	26,264	54,531	29,567	27,601	23,345	19,250	15,066	12,800	11,872
Net interest	**243,984**	**241,118**	**229,755**	**222,949**	**206,167**	**170,949**	**153,073**	**160,245**	**183,986**	**226,603**	**237,109**	**243,947**	**260,231**	**279,982**	**293,536**	**299,871**	**302,466**
(On-budget)	285,198	287,748	281,826	282,745	274,978	247,769	236,618	246,473	275,822	324,325	343,112	358,258	382,081	411,371	435,707	454,522	469,661
(Off-budget)	-41,214	-46,630	-52,071	-59,796	-68,811	-76,820	-83,545	-86,228	-91,836	-97,722	-106,003	-114,311	-121,850	-131,389	-142,171	-154,651	-167,195
Other functions	**74,466**	**82,320**	**98,147**	**113,835**	**107,093**	**117,113**	**123,088**	**133,307**	**141,818**	**138,366**	**130,440**	**149,435**	**158,449**	**158,600**	**156,458**	**159,603**	**160,411**
International affairs	15,228	13,109	15,243	17,216	16,493	22,351	21,209	26,891	34,595	29,549	28,510	34,826	38,027	37,408	38,710	39,352	39,266
General science, space and technology	17,173	18,217	18,121	18,633	19,784	20,767	20,873	23,053	23,628	23,616	25,566	27,631	29,170	29,661	30,678	32,437	33,685
Agriculture	8,890	12,078	22,880	36,459	26,253	21,966	22,497	15,440	26,566	25,970	17,663	20,967	19,070	18,354	18,113	17,959	17,547
Administration of justice	20,618	23,360	26,536	28,499	30,202	35,061	35,340	45,576	40,019	41,016	41,244	46,202	51,143	48,859	48,294	48,617	49,035
General government	12,557	15,556	15,367	13,028	14,361	16,968	23,169	22,347	17,010	18,215	17,457	19,809	21,534	24,839	21,191	21,768	21,410
Allowances	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	-495	-521	-528	-530	-532
Undistributed offsetting receipts	**-49,973**	**-47,194**	**-40,445**	**-42,581**	**-47,011**	**-47,392**	**-54,382**	**-58,537**	**-65,224**	**-68,250**	**-82,238**	**-87,742**	**-80,435**	**-90,874**	**-89,042**	**-94,694**	**-99,987**
(On-budget)	-43,490	-40,142	-33,060	-34,944	-39,101	-38,514	-44,780	-47,206	-54,283	-56,625	-69,939	-74,655	-66,651	-76,323	-73,499	-78,413	-82,670
(Off-budget)	-6,483	-7,052	-7,385	-7,637	-7,910	-8,878	-9,602	-11,331	-10,941	-11,625	-12,299	-13,087	-13,784	-14,551	-15,543	-16,281	-17,317
Total, Federal outlays	**1,601,307**	**1,652,685**	**1,702,035**	**1,789,216**	**1,863,190**	**2,011,153**	**2,160,117**	**2,293,006**	**2,472,205**	**2,655,435**	**2,730,241**	**2,931,222**	**3,107,355**	**3,091,340**	**3,171,233**	**3,221,828**	**3,398,886**
(On-budget)	1,290,681	1,336,081	1,381,257	1,458,451	1,516,352	1,655,491	1,797,108	1,913,495	2,069,994	2,233,366	2,276,604	2,461,157	2,615,476	2,574,962	2,630,478	2,653,833	2,769,663
(Off-budget)	310,626	316,604	320,778	330,765	346,838	355,662	363,009	379,511	402,211	422,069	453,637	470,065	491,879	516,378	540,755	567,995	629,223
As percentages of outlays																	
National defense	16.9	16.2	16.1	16.5	16.4	17.3	18.7	19.9	20.0	19.7	20.2	20.7	21.7	19.1	17.7	17.5	16.8
Human resources	62.6	62.5	62.2	62.4	64.1	65.5	65.6	64.8	64.2	63.0	64.4	63.6	62.6	65.5	67.2	67.7	69.2
Physical resources	3.7	4.5	4.8	4.7	5.2	5.2	5.4	5.1	5.3	6.2	4.9	5.2	4.8	4.2	3.8	3.5	3.2
Net interest	15.2	14.6	13.5	12.5	11.1	8.5	7.1	7.0	7.4	8.5	8.7	8.3	8.4	9.1	9.3	9.3	8.9
Other functions	4.7	5.0	5.8	6.4	5.7	5.8	5.7	5.8	5.7	5.2	4.8	5.1	5.1	5.1	4.9	5.0	4.7
Undistributed offsetting receipts	-3.1	-2.9	-2.4	-2.4	-2.5	-2.4	-2.5	-2.6	-2.6	-2.6	-3.0	-3.0	-2.6	-2.9	-2.8	-2.9	-2.9
Total, Federal outlays	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
(On-budget)	80.6	80.8	81.2	81.5	81.4	82.3	83.2	83.4	83.7	84.1	83.4	84.0	84.2	83.3	82.9	82.4	81.5
(Off-budget)	19.4	19.2	18.8	18.5	18.6	17.7	16.8	16.6	16.3	15.9	16.6	16.0	15.8	16.7	17.1	17.6	18.5
As percentages of GDP																	
National defense	3.3	3.1	3.0	3.0	3.0	3.4	3.7	4.0	4.0	4.0	4.0	4.2	4.5	3.7	3.4	3.2	3.1
Human resources	12.3	12.0	11.6	11.5	11.9	12.7	13.1	12.9	13.0	12.8	12.9	13.0	12.9	12.8	12.8	12.5	12.9
Physical resources	0.7	0.9	0.9	0.9	1.0	1.0	1.1	1.0	1.1	1.3	1.0	1.1	1.0	0.8	0.7	0.6	0.6
Net interest	3.0	2.8	2.5	2.3	2.0	1.6	1.4	1.4	1.5	1.7	1.7	1.7	1.7	1.8	1.8	1.7	1.7
Other functions	0.9	1.0	1.1	1.2	1.1	1.1	1.1	1.2	1.2	1.1	1.0	1.0	1.1	1.0	0.9	0.9	0.9
Undistributed offsetting receipts	-0.6	-0.5	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.5	-0.6	-0.5	-0.5	-0.5
Total, Federal outlays	**19.6**	**19.2**	**18.7**	**18.4**	**18.5**	**19.4**	**20.0**	**19.9**	**20.2**	**20.4**	**20.0**	**20.5**	**20.7**	**19.6**	**19.1**	**18.5**	**18.6**
(On-budget)	15.8	15.5	15.1	15.0	15.1	16.0	16.6	16.6	16.9	17.2	16.7	17.2	17.4	16.3	15.9	15.3	15.2
(Off-budget)	3.8	3.7	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.4

* 0.05 percent or less.

Table 5: Historical United States Budget Data – 1997 to 2013 (E)

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